

# The Journal of the Michigan State Medical Society

The Official Organ of the State and County Societies of Michigan

Volume II  
Number 7

DETROIT, JULY, 1903

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REORGANIZATION OF THE MEDICAL PROFESSION OF MICHIGAN.

ALBERT E. BULSON,  
Jackson.

Before entering upon the weightier matters that engage the attention of the Society, permit me to express my appreciation of the distinguished honor which you conferred upon me, when you selected me as your presiding officer for the year just closing.

It has been my most earnest desire to give to the Society the very best service at my command, and the results must needs be left with you.

Among the many duties devolving upon the President of the Michigan State Medical Society, a part of which are prescribed by the Constitution and By-Laws,

\*Delivered at Annual Meeting of the Michigan State Medical Society at Detroit, June 11, 1903.

is the making of an annual address. Not because I consider it a duty, however, would I address you upon this occasion, but because I greatly desire that you shall carefully consider the growth and enlarged sphere of the Society.

We meet to-day under entirely new conditions,—this session being the first under the new regime, and the twelve months just closing, has been the crucial year of our existence as a Society.

I am soon to take my leave as your presiding officer, and, as I take glad pride in giving you an account of my stewardship, I have chosen to briefly recapitulate the growth of the reorganization movement, and what that growth signifies when transmuted into action along the various lines of thought and work in our own state.

Up to the beginning of the present year, the efforts of the Society were directed toward organization in the simple form.

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I am soon to take my leave as your presiding officer, and, as I take glad pride in giving you an account of my stewardship, I have chosen to briefly recapitulate the growth of the reorganization movement, and what that growth signifies when transmuted into action along the various lines of thought and work in our own state.

Up to the beginning of the present year, the efforts of the Society were directed toward organization in the simple form.

My honored predecessor in office, Dr. Leartus Connor, gave us at the last annual

meeting, a lucid resume of the history of the Society from its organization in 1819, covering a period of eighty-three years, and those who heard this most excellent address, or have since read it, as published in The Journal of the Society, can but be impressed with the mettle of the men who organized the Society, and made up its membership.

Looking backward, from the vantage-ground of the present, we can but marvel at the work accomplished by a few faithful, self-sacrificing physicians, in organizing and maintaining, through so extensive a period, a society which has been the peer of any medical society in the country.

If the Society, always numerically small under the old regime,—never having reached a membership of seven hundred, could hold such exalted ideals, and maintain so pre-eminent a standing among her sister states, we have reason to expect larger things from the profession to-day, if we can unite, into one harmonious whole, the four-thousand five-hundred physicians of the state of Michigan.

For several years the medical journals and societies of the various states have been advocating the importance of a thoroughly organized medical profession, but a certain apathy existed among its members, and the suggestions met with no response upon their part, even though it appealed to their own best interests.

But, thanks to the perseverance of such men as McCormack, of Kentucky, Simmons of Chicago, Reid of Ohio, some of the "Wheel-horses" of Michigan, and a host of others that I might mention, who were actuated by one common purpose, and a genuine belief in the future greatness and exalted dignity which our chosen

profession should occupy. Their appeal for a broader and higher plane of organization has not been in vain, but, like the "Casting of the bread upon the waters," it has returned a hundred-fold.

#### A NEW ERA.

In 1901, at the St. Paul meeting of the American Medical Association, a "New era" dawned upon the medical profession of the country. A plan that had been most carefully formulated, after years of faithful and earnest labor, was presented to the Association, and was found to be so complete in all its provisions, that it was immediately adopted. The plan contemplated the reorganization of the entire medical profession of the United States upon one common basis.

The first step was toward the reorganization of the American Medical Association, to be followed by the reorganization of the State and County Societies, each in harmony with the other and with the national body; the unit to be the County Society,—the real, active, energizing force.

Acting upon a recommendation from the American Medical Association, the President of the State Society, Dr. Learthus Connor, appointed a committee of three members to formulate a new constitution and by-laws, which should be in conformity with the new plan of organization.

After many meetings of this committee a report was finally submitted to the State Society, at the annual meeting at Port Huron, in 1902. This committee recommended the making of some radical changes in the plan of organization of the Society. The purpose of the Society, as recommended by the committee, is de-

fined in Article II of the Constitution as follows:

"To federate and to bring into one compact organization the entire medical profession of the state of Michigan, and to unite with similar societies in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests, and to the enlightenment and direction of public opinion in regard to the great problem of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

To the happy surprise of the Committee on Reorganization, its report was unanimously adopted by the Society, without debate or discussion of any kind. It was also voted that the committee should be continued, and empowered to make such additional changes in their report, as, in their judgment, should appear essential to the completion of the work of reorganization of the Michigan State Medical Society.

July 10th, 1902, the committee with the newly appointed Council, met in Detroit, and made some important changes, notable among them being the reduction of yearly dues from three to two dollars, the same to be paid to the Secretaries of the County Societies, the latter paying the same to the Secretary of

the State Society, by an assessment *per capita*.

As the work of reorganization and the publication of the Journal of the Society would greatly increase the expense the first year, it will readily be seen that the reduction of the annual dues from three to two dollars would naturally make some of the committee a little pessimistic, but with an abiding confidence in the plan of organization, and the hearty co-operation assured by the profession of the state, they could readily see the wisdom of the change.

The purpose of the committee was to make the annual dues as small as would be commensurate with the financial demands for paying the actual running expenses of the Society.

Provision was also made for the publication of the transactions of the Society in journal form, a copy to be furnished each member of the organization in good professional standing, without extra cost.

#### THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

The importance of having a representative State Medical Journal, as the official organ of the Michigan State Medical Society, needs no comment. With the active co-operation of the medical profession of our state, it will stand as an exponent of advanced medical thought, and fill a long-felt want.

Every County organization of the state can have equal representation in The Journal, and to this end, reports of meetings of local Societies, scientific papers, discussions and reports of cases are solicited by the editor for publication. As The Journal of the Society should be the mouth-piece of the profession of Michi-

gan, the articles published in it should be, as far as possible, of original, scientific research, and of a quality that will reflect credit, not only upon the author, but upon The Journal itself, and the profession of the state which it represents.

#### THE HOUSE OF DELEGATES.

Article V of the Constitution provides for a House of Delegates, which "Shall be the legislative and business body of the Society, and shall consist of (1) delegates elected by the Component County Societies, and (2) *ex officio*, the officers of the Society, as defined in this Constitution."

Chapter IV of the By-Laws, provides for representation in the same as follows: "Each Component County Society shall be entitled to send to the House of Delegates each year, one delegate for every fifty members, and one for each major fraction thereof."

The wisdom of inaugurating this branch of the State Society, appeals to the good judgment of every member, for while it is thoroughly representative, it will do away with the old method of conducting the business affairs of the Society, which was characterized by the loss of valuable time, and the embarrassments incident to the manipulation of a large and unwieldy general session.

While the supreme power is vested in the House of Delegates, the form of government is thoroughly democratic. All meetings are open to the members of the Society, and a summary of all proceedings is to be presented at the last general session of each annual meeting, and published in The Journal. To the House of Delegates is intrusted the division of the state into twelve Councilor Districts, cor-

responding with the twelve congressional districts, also the election of a Councilor, to be the active organizer and representative of the Society, in his district. Upon the wise and judicious selection of the Councilor depends, in large measure, the success of the Society.

It is also the function of the House of Delegates, to "Consider and advise as to the best interests of the profession, and shall use its influence to secure and to enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto."

#### THE COUNCIL.

The Council constitutes the real, working, energizing force of the Society. By referring to Chapter VIII, Section 2 of the By-Laws, you will see that, "Collectively, the Council shall be the Board of Censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members to the Component Societies, or to this Society.

"All questions of an ethical nature shall be referred to the Council, and it shall also hear and decide all questions of discipline affecting the conduct of the members, or of a County Society upon which an appeal is taken from the decision of an individual Councilor.

"It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every reputable physician of the state has been brought under medical society influence.

"The Council shall have authority to appoint an editor for The Journal, and such assistants as it deems necessary, and shall also pass upon all matters of the Society,

pertaining to the disbursements of money."

I have enumerated only a few of the many duties devolving upon the Council, and, as the duties are so manifold, and the powers so great, much depends upon a wise selection of men who are to conduct the business affairs of the Society.

#### THE COUNTY SOCIETY.

To-day the County Medical Society is the chief center of interest, as through it only can a physician become a member of the State Society, and the American Medical Association. Under the new regime, the County Society is made the sole judge as to eligibility for membership, and, it seems to me, that one of the wisest steps in the whole plan of reorganization was taken when the County Society was made the basis for membership in the state and national bodies. As the County Society is now the unit, it should be made as strong and representative as possible, and to this end, around it should cluster the strength and professional ability of every physician within its jurisdiction.

That there would be great differences of opinion among physicians of the state regarding the interpretation of Chapter XIII, Section 5 of the By-Laws, was to be expected. The clause referred to reads as follows:

"Every reputable, and legally-registered physician, who is practicing, or who will agree in writing, over his own signature, to practice non-sectarian medicine only, and to sever all connections with sectarian colleges, societies, and institutions, shall be entitled to membership."

In view of our habits of thought, and the ethics of the past, this would seem to be an unreasonable clause to ask a

"Regular physician" to subscribe to, but, after due deliberation upon the matter, we must be candid enough to admit that we have a common ground with all who are striving to improve the health, the sanitary education, and the general welfare of the community; nor need we fear that this evolution of our ideals will, in any way, weaken our principles or reflect discredit upon our organization, but, on the contrary, I believe that we have strengthened the cause thereby.

Any representative gathering of physicians can be depended upon to do the right and courteous thing, in any and every emergency that may arise. Marcus Aurelius has said that, "No man can injure us save by our own consent," and, as we, when we harbor a grudge against another individual, are the more deeply injured than the person who is the object of our hostility, so do we receive the deeper injury when we cherish dislikes and prejudices against our fellow-physicians, simply because they fail to see things just as we do. The incorporation of the clause referred to in the new Constitution, means only what has long been an unwritten law, and settled belief among the members of the profession. If you will take the time and trouble to examine the records of the Society, you will find that, in years past, there have been physicians of various schools of medicine enrolled among its membership, and, in reality, they have conformed with the provision as incorporated in the By-Laws in question in order to become members; and as far as my knowledge goes, every such member has proven himself worthy of the confidence reposed in him.

The advancement in medical science the past twenty-five years, has wrought a

marvelous transformation in the practice of medicine and surgery; and bacteriology, serum-therapy, electro-therapy, and public hygiene have placed medical men upon a common ground, and every physician in the state ought to be willing to join hands with every other physician in an effort to alleviate human suffering. My own desire in the matter is to see an organization which shall draw to its councils every reputable medical man and woman in our state, and at the same time, that every member of it shall be known to possess a broad and liberal knowledge of medicine as a true science and art.

The medical profession of our state has been a most potent factor for good in every community, but we all well know that because of the criticisms and jealousies among physicians, which have been a reproach and a by-word among the laity, the influence which we might have exerted for the good of the community at large, has never been brought into active operation in its fullest sense, but has remained dormant in consequence.

In our public gatherings we have been careful to eulogize the value of our educational influence over the masses, yet, I ask you, how much weight have our opinions as medical men amounted to in public matters, and with what indifference have those who make our laws listened to our protests and suggestions? Why is it, that during the eighty-four years of our existence as a Society, that our influence has been so feeble that an almost countless number of absurd fads and intangible delusions should gain such a foot-hold and spread their pernicious influence among the people? Had the medical profession of our state been thoroughly organized, and standing shoulder to shoul-

der in interest in the past, it could have wielded an influence upon our Legislature, that would have brought about far different results in medical legislation, than those which stand upon our statute books to-day.

But I am proud to say that a brighter day has dawned, for, by the unanimous action of the Society at the last annual meeting, the Michigan State Medical Society was placed "In affiliation with the majority of the other states in the union, and in step with the great national march of medical progress; and when we stop and reflect upon this great change that has come to be, we at once recognize the fact, that we have drifted by so gradual a process into the current of medical evolution and progress, that we have scarcely noticed a jar or obstruction in the process."

#### RING RULE.

Hitherto, there have been some serious criticisms made regarding the conduct of the affairs of the Society, the charge being, that a few of the more prominent members from the larger cities controlled its affairs, and, that it was easy to carry through a scheme of almost any kind, in which the physicians of the state were not directly interested. While I most earnestly protest against any and every charge of ring rule against the members of the Society, I can readily see the reason for accusations of this character. It will be remembered that the membership of the Society never exceeded 635 up to the time of the Port Huron meeting, in 1902, and that the membership was made up to a marked degree, from the larger cities of the state; and as a natural result, they may have shaped the affairs of the Society, in a meas-

ure. But, under the new regime with its House of Delegates made up from the Societies of every county in the state, and with equal representation according to membership, it precludes even the possibility of any such criticism ever being made again.

#### LECTURERS.

At the semi-annual meeting of the Council, a resolution was passed directing the president to appoint a lecturer for each congressional district, whose duty it should be to hold himself in readiness to assist upon the programmes of the various County Societies in his district by giving a lecture, reading a paper, or holding a clinic. It must be admitted that this is a wise provision, and if systematically and thoroughly carried out will be of inestimable value in furthering the interests of the meetings of the County Societies. It is a recognized fact that outside talent lends interest to the programmes, and stimulates attendance.

The German government,—realizing how impossible it is for the physicians in the rural districts to keep in touch with advanced medical thought, have but recently appointed a corps of eminent physicians to visit the different sections of the empire, and give post-graduate instruction, or in other words, carry schools of instruction to those members of the profession who seldom attend medical societies, or receive post-graduate instruction of any kind, after graduation. It has been the pleasure of the President to appoint seven of the required number of lecturers, upon the recommendation of the respective Councilors, who have been able to give valuable aid in the work of the several districts. The remaining five are yet to

be appointed, the matter going still under advisement.

#### THE CODE.

The Committee on the Revision of the "Code of Ethics" of the American Medical Association has made some notable changes in that famous document. The word "Code" has been eliminated, and the expression, "Principles of Medical Ethics of the American Medical Association," adopted as adequately descriptive of the present status of the profession to-day. The principles of medical ethics as now in force leave each state to form such code, and establish such rules as it may regard fitting and proper, for the regulation of the professional conduct of its members; providing that there shall be no confliction with the established ethical principles of the American Medical Association. This action gives each State Medical Society discretionary powers in regard to disciplining of members, and the regulation of all other purely state affairs. I wish to call your especial attention to Chapter II, Section 7 of the "Principles of Medical Ethics" as it now reads. By referring to the section mentioned, it will be seen that it speaks explicitly in regard to the matter of advertising. It is incompatible with the ethical and honorable standing of members to resort to the methods used by charlatans, in publishing accounts of surgical operations, boasting of cures, or in any manner heralding their success to the public at large through the medium of the public press. It is also unethical to use the names of the American Medical Association, the State or County Societies in advertising health resorts, sanitariums, etc.

It takes for granted that if any member is conducting a sanitarium or health resort, he is doing so along the line of purely ethical principles, and that by the conduct of the same, will give no grounds for criticism on the part of the profession at large.

#### RECIPROCITY.

Your President and Secretary have been in correspondence with several of the State Societies, regarding medical reciprocity, and all without exception, express a hearty desire to co-operate in the movement; and it is highly probable, that as soon as the proper antecedent action has been taken, and a uniform and equal requirement adopted, the interchange of medical certificates will, without doubt, be unanimously endorsed by the various State Societies, and reciprocity of membership established.

The promiscuous medical legislation now in force in the various states, prevents a physician of one state, even though legally qualified to practice therein, from crossing the border into another state to practice his profession (except for consultation) unless he submits to, and passes a creditable examination. I think that we are all of the opinion that the demanding of an examination from an educated and reputable physician, who may have pre-eminent standing in the profession, by virtue of education and years of practice and experience, is a great injustice, and should be remedied by the law of reciprocity.

In this connection I would like to call your attention to an item in the Journal of the American Medical Association, which reads as follows:

"There was held in Chicago, April 23, 1903, a meeting of the representatives of the medical ex-

amining boards of Indiana, Ohio, Iowa, Kansas, Michigan and Wisconsin. An organization was formed, entitled the American Confederation of Reciprocating, Examining and Licensing Medical Boards of the United States of America, having for its object the establishing of reciprocal relations between the medical examining and licensing boards of the United States."

For the purpose of establishing medical reciprocity among the states composing it, the American Confederation of Reciprocating, Examining and Licensing Medical Boards does hereby agree to the following propositions as a basis of reciprocal medical registration:

(a) That a prerequisite to reciprocal registration, the applicant therefor shall file in the office of the board of the state of which he is a licensee such evidence as will enable the said board to certify that he is of good moral and professional character. Such certificate shall be filed with his application for reciprocal registration in another state.

#### QUALIFICATION 1.

(b) That a certificate of registration showing that an examination has been made by the proper board of any state, on which an average grade of not less than 75 per cent. was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a medical college in good standing in the state where reciprocal registration is sought, may be accepted, in lieu of examination, as evidence of qualification. Provided, that in case the scope of the said examination was less than that prescribed by the state in which registration is sought, the applicant may be required to submit to a supplemental examination by the board thereof in such subjects as have not been covered.

#### QUALIFICATION 2.

(c) That a certificate of registration, or license issued by the proper board of any state, may be accepted as evidence of qualification for reciprocal registration in any other state. Provided, that the holder thereof was, at the time of such registration, the legal possessor of a diploma issued by a medical college in good standing in the state in which reciprocal registration is sought, and that the date thereof was prior to the legal requirement of the examination test in such state.

During the preparation of this address, the following letter relative to reciprocity was received by me from Dr. B. D. Harrison, Sec'y of the Board of Registration:

My Dear Doctor—I am in receipt of yours of 3rd inst., for which please accept my thanks. The Governor signed the bill yesterday afternoon. Re status of medical reciprocity. You state that you have learned that negotiations are in progress between the states of Ohio, Indiana, Wisconsin, Michigan, Iowa and Kansas. It has gone past the stage of negotiation; Michigan is reciprocating daily with Indiana and Wisconsin under Qualifications Nos. 1 and 2, and will in a short time reciprocate with Ohio, Iowa and Kansas under both qualifications, just as soon as these latter states have completed their forms. All these states reciprocate with one another and with Illinois, New Jersey and Maine, and some other states, under Qualification No. 1. In addition to these we have some twenty states' applications in for membership in the Confederation, so that by January 1st, next, practical reciprocity will be in full swing in at least twenty-five states. A year ago last January, upon suggestion from the Michigan Board, a meeting was held in Chicago and the American Confederation of Reciprocal Examining and Licensing Medical Boards was formed, with a membership composed of state boards, not members of state boards. Several years ago the National Confederation of State Medical Examining and Licensing Boards was formed, composed of members of state boards and others favoring reciprocity. This latter association has done absolutely nothing towards bringing about reciprocity, and as it is composed of members of state boards instead of state boards it has not power to do anything practical. For this reason a new association was formed as suggested by Michigan, and within a year it has succeeded in actually accomplishing reciprocity upon practical lines. Hardly a day passes that I do not pass upon one or more reciprocity certificates, so you will see that at the present time reciprocity is not an indefinite theory but a practical accomplishment; practical reciprocity is virtually a Michigan product.

As Michigan has but recently raised the standard of qualifications for the practice of medicine in the state through the Nottingham amendments to the Chandler Bill, so she has also been an active factor in arranging the provision for reciprocity among the states.

The work already accomplished in this regard, is gratifying, indeed, and reflects

great credit upon our Legislative Committee. To Dr. B. D. Harison, chairman of the same, who has given his most earnest care and attention in the forwarding of these two important features of the work, we owe our special thanks.

#### OBJECTS OF ORGANIZATION.

The objects to be gained by organization are systematically outlined in the following paragraph taken from the report of the Committee on Reorganization, which was made by Dr. N. S. Davis, of Chicago, one of the founders of the American Medical Association, in 1887:

"The three objects of paramount importance to be accomplished by medical organization are: (a) the promotion of direct personal and social intercourse between physicians, by which mutual respect, personal friendship and unity of sentiment are greatly promoted; (b) the more rapid increase and diffusion of medical knowledge, scientific and practical; and (c) the developing, unifying, concentrating and giving efficient practical expression of the sentiments, wishes, and policy of the profession, concerning its educational, legal and sanitary welfare and the relations of the latter to the community as a whole."

The past history of the medical profession of Michigan has furnished us much inspiration for the future, and we have taken a modest pride in the growth of our work during the past year, with 58 branch societies organized, embracing 72 counties of the state with a membership of 1712, an increase of over 1000 since the last annual meeting.

But, while we congratulate ourselves upon our additions to membership, our in-

creased usefulness as members of the profession, the well-merited recognition of our influence, and the good we can do each other and the commonwealth at large, we must realize that our work is yet in its incipiency; that there are still problems for solution and facts for reflection; and it is but reasonable to expect that the active, aggressive work of the past shall not cease until the name of every eligible physician in our state is enrolled upon the escutcheon of the Society. So, let us redouble our efforts the coming year, and try to realize the importance of our opportunities and responsibilities, and, by giving it the loyal and enthusiastic support which the work merits, we shall help to retain the position of pre-eminence which our Society has attained to among her sister societies in the various states.

#### SUGGESTIONS.

The County Society is the unit in our work, and, as upon it depends the organic life of the State Society, and of our representation in the American Medical Association, let me urge upon you the necessity of each one feeling a personal responsibility for the future success of his own local society. Set aside the one afternoon and evening as prescribed by the Constitution and By-Laws for attendance upon the meeting, and hold that engagement paramount to all social duties. A certain amount of enthusiasm and sacrifice is necessary to the success of any undertaking, and it is only by systematic, persistent, pains-taking effort, and by personal solicitation that we can hope for advancement in the cause.

Encourage the young men of the pro-

fession to identify themselves with the Society, for the mutual benefit of both. Be active and diligent in the work, and safeguard the interests of the profession in every possible way. Be broad-minded and liberal, at the same time seeking to protect our noble profession from any and every influence that would seek to degrade it.

It is through the County Society only that the individual factor can be reached, and it is there that we must concentrate our efforts, bringing to bear upon it any and all measures that will tend toward its up-building, do away with petty jealousies, promote good-fellowship, aid scientific and educational advancement, and otherwise exert an elevating influence upon its members. This done, the State and National Societies will take care of themselves. The broader interests of the work, which reach out from the County to the State Organization, and through that to the National, will create an altruistic atmosphere, that is inimical to strife and jealousy, and will enable us to hand down to our successors our noble art in the highest state of perfection attainable by us, and to gain from the public the respect which our profession merits.

#### FINALE.

Finally, I wish to bear witness to the harmony of thought and action as manifested by the Officers and Councilors of the past year; and the faithful and efficient service rendered by all alike, causes us to wonder at the ability and unselfish devotion which they have bestowed upon the interests of the Society.

The efficiency and self-sacrificing labor of those who make up the Council are

worthy of especial mention. A rare zeal and enthusiasm have characterized their work from the beginning, and most generous have they been in giving of their time and money to the furtherance of the cause. I have been privileged to meet most of the Councilors, in their work in the various sections of the state, and I have found, with one or two exceptions, an equal amount of enthusiasm and a hearty co-operation in support of the new plan of organization.

To the Chairman of the Council, Dr. Leatus Connor, my thanks are due for valuable aid in solving the complex problems which have confronted us, and for many kind and helpful suggestions.

I wish to make honorable mention of the work of our efficient Secretary, Dr. Andrew P. Biddle. The extra work of the year incident to the successful launching of The Journal and editing the same, assisting the Councilors in their work in the various districts, together with the multiplicity of duties which fall to the Secretary in so large a Society, has been executed in a manner that is well-nigh perfect, and will be difficult to equal. The tireless energy, the fertility of resource, and the hearty co-operation not of the Secretary alone, but of the other Officers and Councilors as well, have made possible what would otherwise have seemed truly formidable.

In conclusion, I would say to the members who are to be the Officers and Councilors for the coming year, and to the profession at large, that you vouchsafe to my successor in office, the uniform courtesy, kindly consideration and assistance that have been given me.

## A CASE OF STREPTOCOCCIC PUERPERAL INFECTION SUCCESSFULLY TREATED IN WHICH SERUM THERAPY WAS USED.\*

H. W. LONGYEAR,  
Detroit.

This case, being typical of a number seen by the writer during the past five years, is reported for the purpose of illustrating four points, viz.: First, the necessity of an early bacteriologic diagnosis; second, the beneficial effects of vigorous treatment, both local and systemic, begun early and carried through with definite plan and aim; third, the probable status of serum therapy as applied to this form of infection; fourth, the fact that iodine is practically a specific remedy for local use in streptococcic infection.

I was called to see the case by Dr. Hugh Cary, of Delray, on March 17, 1903, this being the third day after confinement of a dead child by a difficult and tedious instrumental delivery. This was the sixth confinement, the last three by the same physician. Dr. C. was assisted at the accouchement by another physician and a neighbor who acted as nurse.

The temperature and pulse began to rise immediately after labor and the bowels to distend with gas. Patient had been vomiting a greenish fluid at intervals since the confinement.

The condition of the patient at my first visit was as follows: Age 43, blonde, heavy build, expression good and not especially anxious; pulse 104, regular;

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temperature  $100.6^{\circ}$ ; position on back, limbs extended; abdomen enormously distended with gas and tympanitic everywhere, but not very sensitive to pressure, the distention being apparently due to paralysis of peristalsis from other cause than peritonitis. The uterus was apparently of normal size and easily palpated, and not especially sensitive to touch. The discharge from the vulva was of a very foul odor, quite free in quantity, and of a red color. The lips of the vulva were very much swollen, the perineum not ruptured but a number of small abrasions were present and these were covered with a thick, white pseudomembrane. Examination with the speculum showed a number of similar abrasions on the vaginal wall, all being covered with this same pseudomembrane, which was as closely adherent as the deposit caused by the Kloebs-Leffler bacillus, which it resembled in appearance. No pseudomembrane could be seen on the cervix uteri. The os was patulous. A small pledget of cotton was soaked in the discharge which bathed the cervix and placed in a sterile bottle for bacteriologic examination. This specimen was immediately sent to Dr. Joseph Sill, of the Detroit Clinical Laboratory, with the request that he make a smear examination and report by 'phone.

Local treatment was begun without waiting for the report, and was as follows: First, thorough douching of vagina, with iodine solution—tinct. iodine 1 dr. to water 1 pt.—then, with the speculum in place, all abrasions treated from the cervix down to the vagina with equal parts of tinct. iodine and glycerine. The uterus was then washed out with the iodine solution and afterwards swabbed with the iodine and glycerine. The in-

trauterine douche was used but once afterwards (March 19th) as it gave pain and did not bring away anything abnormal. The uterus, however, was swabbed with the iodine and glycerine each time after the vagina had been cleansed. This application was thus thoroughly made by Dr. Cary, each time using the speculum and touching each membrane-covered spot three times in each twenty-four hours for five days (to March 22nd), when one application a day was made for three days more (to March 25th). A vaginal douche of a quart of the iodine solution was used by the nurse every three hours during the use of the iodine and glycerine mixture, and afterwards less frequently.

The other treatment ordered, which was continued during the activity of the disease, was turpentine enemata when indicated, internally the use of protonuclein gr. X every two hours, whisky 1 oz. every three hours, and liquid peptonoids with creosote 1 dr. every hour. Calomel was also ordered, gr. VI every four hours till effective, which acted well after the third dose, and this dosage was repeated twice again during the illness by Dr. Cary. Subcutaneous transfusion of normal salt solution was used once, March 21st, a pint under each breast, by Dr. Cary, assisted by Dr. Clippert.

Dr. Sill reported on the specimen on the evening of the same day, that it contained streptococci with a number of other germs of less importance. The use of antistreptococcal serum was then decided on, and the first dose of 10 c. c. given the next morning. The serum was used in this dose three times a day for six days, then twice a day for three days, and once a day for three days, when it was discontinued on the 29th of March, and given

again April 5th and 6th, one dose on each day of 10 c. c. being ordered. Thus, eighteen doses altogether were injected into this patient, a total of 180 c. c. No abscess occurred at the sites of the punctures, and very little local irritation was manifested.

On March 31st a rash appeared for a short time on legs, thighs and shoulders, which itched very greatly, and was doubtless an urticaria resulting from the use of the serum.

The behavior of the infected vulva and vagina under the local treatment was remarkably satisfactory, the swelling rapidly diminishing and the thick white pseudo-membrane covering the abrasions becoming smaller and thinner each day till March 25th, when the patches had wholly disappeared and the parts appeared healthy. The temperature remained between 100° and 101.4° until March 22nd, when it suddenly shot up to 103.6°, caused apparently by a streptococcic infection of the saline transfusion used the day before, as the points of puncture became highly inflamed and suppurated. The high temperature, however, subsided on the third day when it afterwards assumed a lower level than previous to the transfusion, notwithstanding the fact that pus was forming under the breasts, the first being evacuated on March 28th, and the second April 2nd. The pulse was of good quality and but little over 100 until March 20th, when it became very weak and intermittent accompanied by shortness of breath and thoracic distress. This proved to be the beginning of an endocarditis, which was clearly made out on March 22nd when a blister was applied to the chest, and infusion of digitalis 4 drs. with strychnia sulph. gr. 1/40 every two hours ordered.

This irregularity and weakness ceased at the end of four days, and a mitral murmur which had been very distinct at first was only just distinguishable and disappeared entirely by the 28th of March. The pulse from this time on sank to a lower level.

On March 29th the left leg began to be painful, and soon showed the usual signs of a septic phlebitis. The leg became more and more swollen, with occasional slight chills for some days, during which time guiacol was applied to the skin, which was covered with cotton and bandages. On April 5th and 6th the two doses of serum were given before mentioned. At this time the nurse's report reads: "April 5th" (before giving serum), "patient is languid; leg very painful, has headache, pulse bounding, and 90, temperature 99½°."

"April 6th" (second day of serum), "a comfortable day."

"April 7th, leg much more easy and swelling greatly reduced. Had a good night."

"April 8th, sat up in chair for an hour quite comfortably. Had a good night." Since then she has constantly improved, and Dr. Cary reports the heart all right and the leg well, except for some soreness.

#### DEDUCTIONS.

The early bacteriologic diagnosis permitted a prompt outlining of the course of treatment and the positive knowledge of the variety of infection with its known tendencies as to persistence, toxicity, sequelae, etc., afforded solid ground to stand on in the persistency and aim of such treatment. The bacteriologic findings in the different varieties of puerperal infection are quite positive, while the clin-

ical diagnosis as to differentiation is usually impossible.

Soon after the recovery of the case here reported, the writer was called in consultation to two others, one of which had initiatory symptoms exactly like this one (tympanites, pseudomembrane, etc.), but the bacteriologic diagnosis was quite different, the infection being Kloebs-Lefler bacillus, and staphylococcus. How useless it would have been, and harmful to the patient, to have jumped at the conclusion that this was another streptococcic infection and treated it accordingly. As it was, the use of the antidiphtheritic serum for twenty-four hours with a few local treatments with iodine, cut the disease short.

The third case seen was clearly one of gonorrhreal infection, as the history, infection of the child's eyes, purulent discharge without pseudomembrane, indicated the diagnosis, but the examination of a specimen of the discharge, sent to the Clinical Laboratory, made the diagnosis positive. Here, of course, the treatment was quite different from the other two. Internally, urotropin; locally, the frequent (every 8 hours) application of a solution of protargol (1%) to the endometrium and vagina. Ice over the uterus and Fallopian tubes as its use was indicated by pain and tenderness, resulted in the probable cure of this patient in about three weeks. An indurated mass is still present at the left of the uterus as the result of the invasion of the Fallopian tube, and it is possible that this may have to be removed at some future time.

As streptococcic puerperal infection usually has a fatal termination, it must be concluded that in this case some agent

was instrumental in preventing such an issue.

Locally the disease tends to pass rapidly upward from its first site of infection, causing a successive infection of the vagina, uterus, Fallopian tubes and peritoneum, and the lymph canals, which are so abundantly supplied to these parts, quickly carry the disease to the deeper structures, resulting frequently in abscess formation of formidable proportions, if death from peritonitis does not supervene before this can take place.

In this case the disease did not apparently pass beyond its first site of implantation in the vagina, the uterus at no time showing any signs of invasion, so that the local treatment must have been efficacious. Any less active local treatment than that which Dr. Cary gave this patient during the first six days following the correct diagnosis would no doubt have resulted in the extension of the growth of the streptococcus into the uterus and Fallopian tubes. This is a part of the treatment that can not be delegated to the nurse, but must be attended to by the physician himself, even though it result in great personal sacrifice. If the disease can be headed off before it enters the uterus where its local treatment is so difficult, nine-tenths of the battle will be won.

The first local treatment is frequently followed by such a marked improvement that, to one inexperienced in the treatment of streptococcic infection, the danger will seem to have passed, but this is only a temporary improvement and is caused by the sudden shutting off of the supply of ptomaines that has been pouring into the system from the infected area, and if the local treatment is not followed up assiduously, and the ground gained thus held,

the local growth of the infection, which cannot possibly be killed by one or two treatments, will surely spread upwards.

In this case the systemic effect of the disease was manifested by those two very common sequelæ of streptococcic infection, viz.: Endocarditis and phlegmasia. Both attacks were very mild in character, the endocarditis coming on during the active use of the serum, was apparently modified by its use as it rapidly passed away, and was gone in a week's time, while the phlegmasia, beginning later, and several days after the use of the serum had been discontinued, was gaining considerable headway when two doses of the serum apparently cut it short. Thus it would seem that in this case the serum acted in a way to modify the action of the disease in the system, causing it to be less violent and destructive, holding its power at bay, as it were, until the phagocytes and eliminatives could gather together their forces and destroy and remove the dangerous element.

From an experience in the use of the serum in a number of cases similar to this one, I believe that this theory of the action of the serum is correct and that used freely, and with this idea in view, and not expecting sudden and active results as is obtained from the use of the anti-diphtheritic serum in diphtheria, the results will be satisfactory. Besides the local treatment, however, which is so necessary to stop the formation of the pto-maines which poison and overwhelm the system, and the serum to fortify the blood, internal medication should be used not only to induce active elimination but also to support the heart and nervous system and, when indicated, to prevent the putrefactive fermentation in the alimen-

tary tract which always supervenes upon the condition of intestinal paralysis that frequently obtains in these cases.

Digitalis, in the form of infusion, made with Squibb's powder, strychnia, alcohol in the form of brandy or whisky and used freely, calomel occasionally in purgative doses, creosote in liquid peptonoids, in frequent doses, are favorite remedies of the writer. The turpentine or glycerine enema is often indispensable to cause the torpid bowels to unload their distressing quantities of gas, and the turpentine stupe is often very grateful to the patient. The active use of the ice bag is indicated in cases attended by the high temperature and pain which occurs with invasion of the uterus and adnexa.

#### ORATION ON MEDICINE\*

##### THE ROLE OF SUGGESTION IN THERAPEUTICS.

IRWIN H. NEFF,  
Pontiac.

If you will recall to mind the efficacy of a bread pill, the prompt relief often obtained by a placebo, or the improvement resulting from the use of a nostrum, you will have a homely illustration of the benefit which can result from the employment of "suggestion." It is true that many physicians use such measures, when they believe that the disease or symptom is an imaginary condition. They fail to recognize that certain syndromes, and even pain itself, may have, in part, a psychical interpretation. The "suggestive treatment" is not a departure from ethical therapeutics; and it is not an innovation,

\*Delivered at Annual Meeting of the Michigan State Medical Society, June 12, 1903.

as its proprieties were recognized many years ago. Unfortunately the technique of "suggestive therapeutics" and its limitations have only recently been appreciated.

In normal life we are constantly receiving a flow of stimuli from our sensory organs. There is an immediate desire to respond to any stimulus, namely, a "reaction to suggestion." This physiological reply is limited, owing to the intervention of certain mental attributes. The extent and character of the reply may be said to be due to the training of the individual and to his environment. In abnormal mental and physical conditions, we are often surprised to see how readily "suggestion" is obeyed, and if this exalted, receptivity of the patient is taken advantage of, one cannot help but acknowledge that "suggestion" is certainly a valuable adjunct to any method of treatment.

The benefit resulting from the use of Christian Science and its component and affiliated bodies is dependent on "suggestion," which is assisted, it is true, by judicious advertising. It cannot be questioned that much of the benefit obtained by hospital or sanitarium treatment is due, in part, to "suggestion," which is directly due to the environment of the patient. Likewise we cannot but acknowledge that symptomatic relief has followed the use of proprietary medicine. The relief so obtained is not due to any medicant in the nostrum, but is related to "suggestion."

The proficient and ethical physician, and the charlatan alike, use the "suggestive" treatment with this difference: While the former does it with extreme conservatism, the latter employs it indiscriminately, recognizing the fact that his laudatory methods are a means of ad-

vertising, which have a direct bearing on the success of the treatment. The reputable physician, possibly not understanding the limitations of the treatment, uses it conservatively and obtains comparatively little success. The charlatan being unrestricted in his methods, often strikes the keynote of "suggestive therapeutics." While we can with scientific satisfaction at least, pity the ignorance of the "quack," we cannot help but deplore the fact that the physician was not versed in an old, established principle, namely, the efficacy of the "suggestion" well applied.

Is there a physician present who has not envied the success of a colleague, who has successfully conquered a train of obscure symptoms of a "discarded patient?" The failure of the unsuccessful physician may not have been due to faulty diagnosis, but may have been dependent on his inability to recognize his patient's personality.

It is here an opportune time to correct the impression that "suggestion" is only effective when used in neurotic subjects or in persons of inferior intelligence. It is true that the enthusiasts of the various cures may have a well-defined and peculiar psychology. It is nevertheless equally true that we are all amenable to "suggestion" in some form. The character of the "suggestion" and its "modus operandi" can only be determined after individual study. Physicians are aware that in order to successfully combat the symptoms of many diseases, the treatment of such diseases does not depend on the treatment of the malady itself; but is in a large part due to the physician's ability to understand the temperament of the patient and his personality.

People thus cannot differentiate very well between, for instance, intercostal neuralgia and pleurisy, between heart commotion in a neurasthenic condition, and that of valvular heart disease; between the headache of a brain tumor, and that of eye-strain, etc. For this they must at first look to the practitioner, and as a rule, they are thus bound to believe implicitly what is told them. Later on they may come, and sometimes do come to distrust or to half accept what is told them by no matter whom, whether the diagnosis be correct or not. Again, even when the diagnosis is correct and thoroughly believed, the prognosis may be altogether more comprehensive and encouraging than the possibility of relief of the obvious condition may justify.

Finally when it comes to the treatment itself, there is disparity between promise and accomplishment, often irreconcilable. Physicians all know how persistent certain people are in their endeavors to get positive statements, especially when such are as absolutely impossible as unnecessary. But they do not always remember the certainty which sick people are apt to "read into" their most carefully uttered words; their own conceits, hopes and misgivings; and so get unto themselves a summary of facts and fiction, which may be as mischievous as misleading. These people think for the time being of but one thing, namely, that their own concerns are paramount to all else. With this they give tone to all that is told to them, and likewise to all that is not said. As a result they either accept the miracle on the one hand; or else take a long delight in whatever success in new sensations the practitioner may be able to offer them on the other. Moreover they do not forget

that they are sick; that a cure has been promised; or that it seems long delayed.

The number of cases of eye-strain, dyspepsia, kidney diseases, uterine troubles, etc., have at times found no relief from the correction of their difficulty or deformity; but have found relief, at least to their satisfaction, at the hands of some person using a form of "suggestive therapeutics;" and, why? simply because the real nature of the difficulty as affecting the whole patient, has been lost sight of in the intensity of the especial attention given exclusively to some particular part.

Unfortunately this psychology is common to many seeking medical relief; and unless the physician recognizes this condition and gives appropriate treatment by "suggestion," the results of any therapeutic measure may be discouraging.

The possibility of "suggestion" having any medical effect may be said to be dependent on the ability of the patient to receive suggestion; namely, his receptivity, on the personality of the physician; and on the environment of the patient and the methods used. Time does not permit me to emphasize the details of these principles.

"Suggestive therapeutics" should be thoroughly understood, studied assiduously, and put into practice in all diseases. As outlined above, this treatment is used unconsciously in almost all forms. Unfortunately its limitations are not sufficiently recognized, and the treatment has drifted into the hands of charlatans, where it has been of considerable benefit. There is no question but it is our duty to wring it from their hands. The progress which has been made during the past ten years to put it on a scientific basis, is encouraging. "Suggestive therapeutics"

should be recognized for its true value. It should be employed in every disease when indicated, and recognized as a legitimate therapeutic agent. Its limitations must be looked for in every case, and given proper recognition.

### SOME PRACTICAL CONSIDERATIONS ON THE TUMEFAC-TIONS OF THE CLIMAC-TERIC BREAST.\*

THEODORE A. McGRAW,  
Detroit.

I was accustomed for many years to advise my students to operate at once in all cases of tumefactions of doubtful character occurring in the breasts of women over thirty years of age. I was led to give this advice by the melancholy experience, which every surgical specialist has to encounter, of large numbers of cancers, which were brought first to my notice when they had become hopelessly incurable. I found practitioners all over the state advising patients to postpone remedial measures in the early stages of mammary cancer, until the disease had advanced so far as to be obvious even to the lay mind. The reason of this was the difficulty of diagnosis in the early and curable stage of the disorder. The physician shrank from causing alarm in his patient's mind as long as he, himself, felt uncertain as to the character of the painless and obscure induration, hardly perceptible, perhaps, in the depth of a large breast and, while he was comforting his patient with false hopes and awaiting

events, the malignant growth scattered its seed far and wide over the adjacent area and through the lymphatic channels.

The impressions made upon the minds of practical surgeons by such neglected cases, are exceedingly painful. A woman comes for an opinion as to the character of a swelling which has caused her some anxiety. She hopes to learn from the surgeon, what she has, perhaps, been told again and again by her family physician, that there is no reason for alarm, and she is shocked beyond measure when she discovers not only that she has cancer but also that the time for its possible cure has passed forever by. Her invariable and urgent question—a question which is exceedingly difficult to parry—is whether anything could have been done for her relief if she had come six, or twelve, or eighteen months sooner, when she first consulted her doctor. The surgeon is then in a dilemma, for he wishes on the one hand to protect his colleague from blame, while on the other, he feels it his duty to make every woman in the land know that a lump in her breast has possibilities of danger which demand immediate action.

The consideration of such cases, of which I had very many, made it seem to me more humane and more rational to extirpate ruthlessly all tumorous breasts, than to suffer patients who might have cancer to drift into a hopeless doom. The occasional amputation of an organ which might have been saved did not seem to me to compare in evil with the failure to act when the danger to life urgently demanded operative measures. A further reason for the advice which I gave was the tendency of many innocent maladies to develop in time into malignant diseases, or, if not that, to offer a soil favorable to such

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growths. Scars and inflammatory inductions of long standing, syphilitic ulcers and cystic swellings all are found, in many cases, to precede or accompany the development of cancer.

With this experience as a guide, it did not appear unwise to extirpate all breasts thus affected and thus obviate a possible danger. I believe that this policy did work for good in very many cases and that women now living have owed their lives to it, and yet I have become convinced of late years that for certain reasons which I shall state that it ought to be materially modified. It is, in the first place, an opprobrium of our art if we sacrifice unnecessarily any organ, even though it has passed the period of its usefulness. A woman who has lost a breast always feels that she is deformed, nor will it take away from the bitterness of her reproach if told afterwards that the operation was not rendered necessary by the character of the disease—and yet if after a breast is amputated the subsequent examination proves the disease to have been benign, it is only just that the patient should receive the benefit of a knowledge which will relieve her from a constant apprehension and anxiety. I can testify from a long experience that the occurrence of benign swellings in the female breast, even in the climacteric period, is much more common than is usually supposed. Indeed, of late years the experience of my earlier professional life has been so reversed that whereas then I had to mourn over lives lost from delay, I am now more often obliged to dissent from the advice of physicians who have sent to me for operation inflammatory swellings which could be cured by pressure or massage, or cysts which would disappear after puncture.

This experience, though vastly more pleasant to the patient, has nevertheless a most disagreeable phase, inasmuch as the outcome must necessarily reflect on the skill of the attending physician.

I have thus many times been put in the awkward position of disagreeing with opinions which had been given in accordance with my own advice, and yet I could not sacrifice my patient and amputate a breast which could be saved, in order to be consistent with myself. Besides, I have become cognizant of another evil, which may follow, and has followed, upon the expression of a too unfavorable opinion in cases of doubtful diagnosis of mammary tumors.

The country is infested with a great number of cancer quacks, who plunder their victims while subjecting them to horrible and unnecessary tortures by the applications of caustic pastes. I feel warranted in asserting positively that no true cancer of the female breast was ever cured by this method of treatment. My experience in operating on such cases is very large and, as it is my custom to operate at the very earliest possible period, I know positively that the glands of the axilla are always involved at the time when the cancer first manifests itself as a perceptible abnormal change in the gland. I have never found an exception to this rule, although the glands may not become perceptible to the touch until the axillary space has been opened and laid bare. Now the destruction of these infected glands by caustic applications is impossible, as they lie close to the large blood vessels, which would be eroded by the caustic. In such an event the death of the patient from hemorrhage would be only a question of a little time. Even the most reck-

less of these charlatans do not dare to invade this territory with their applications. But, while they do not cure cancers of the breast, they do destroy many breasts containing innocent swellings, which pass among the laity as cancerous, and from these cases they gain a popular reputation.

I have seen many sad cases of the dreadful and unwarranted destruction of tissue for innocent swellings which could have been removed by a single incision.

One patient whom I have treated with in a year—a girl of twenty-six—told me that she had had at the age of sixteen a “hard cancer” of the breast, which had been “cured” by one of these charlatans. She had come to me to be cured of the results of his operations. I found, on examination, that the whole breast had been destroyed, together with a wide area of integument, and that the pleural cavity had been opened. The lung had collapsed and a fistulous opening led into the still suppurating pleural cavity. Now hard cancers do not occur in girls of sixteen. She had doubtless had a fibrous tumor which could have been removed through a small incision, but she had faith yet in the miscreant who had destroyed her breast and lung and ruined her health.

Now, when we pronounce as cancerous, enlargements of an innocent nature, or when we lead our patients to believe them to be such by a too vigorous assertion of danger, we play into the hands of these quacks, for when breasts so affected are removed by caustics and the patients recover, the opinions of the regular physicians are quoted as proofs positive of the malignant nature of the tumors.

For these reasons it becomes incumbent on us all, family physicians as well as surgeons, to perfect ourselves in the diagnosis of affections of the female breasts. We should learn to distinguish, when possible, the benign from the malignant, in order to be able to counsel our patients correctly, neither permitting them to drift into an incurable condition from a disastrous delay nor resorting to measures of severity not warranted by the character of the disease. In studying the diagnosis of the malignant from the non-malignant swellings of the female breast, we may first note that enlargements of a benign or semi-benign character which are liable to be mistaken for cancer or sarcoma, are of two kinds: They may be true neoplasms, fibrous or fibro-cystic tumors, or adenomata or more rarely, vascular, fatty, cartilaginous or bony tumors, or they may be accidental swellings such as inflammations, gummy tumors and the like which may simulate true tumors. We may further note that these accidental swellings form the vast majority of all those which render diagnosis doubtful and obscure. The true tumors of benign character, which develop in the breast after the age of thirty, are comparatively few in number. Of those which are actually met with in practice in older women, the greater number, too, have begun their growth at an earlier age. Of the benign tumors which occur at any age in the mammary gland the great majority again are fibrous in character. After these come the fibro-cystic and the fibro-adenomata. True adenomata are rare, and the other tumors occasionally met with are so uncommon as to be of little account in this question.

The diagnosis of a fibrous tumor is usually easy. Its firmness, its circum-

scribed form, the absence of all secondary knots and all evidences of infection make its recognition feasible even before operation, and when cut into, its bulging, glistening surface is so different from the concave, dull hued and mottled look of the cut scirrhus that the microscope need rarely be used to decide upon its nature. The fibro-cystic and fibro-adenomata could be confounded with the cystic sarcoma and scirrhus, but differ from them nevertheless decidedly in their simpler and less variegated structure. In fact, as regards the diagnosis of one neoplasm of the mammary gland from another we may say in general that difficulty is experienced in distinguishing the benign from the malignant on microscopic examination only when the one is undergoing a degenerative change and is beginning to assume the characteristics of the other. The accidental enlargements, on the other hand, usually either cystic or inflammatory, are not only exceedingly common but are also sometimes most perplexing in their resemblance to scirrhus or sarcoma.

If I were to judge from my own experience I should say that cysts of one kind or another, not including cystic sarcoma or those arising from the disintegration of cancerous or other tumors, are the most common of all tumefactions of the breast.

Those arising during the child-bearing period, and sometimes afterwards, are often milky cysts coming from obstruction of the lacteal ducts. These obstructions may be caused either by imperfect formation of the ducts or by inflammatory changes. They present symptoms which differ according to their location and size, and may appear either as large, globular tumors or as small, ill-defined and obscure swellings under the nipple or deep

in the breast structure. They contain milk, more or less altered in consistency. The exploring needle will reveal their contents either in the form of fluid milk or milk thickened to resemble pus or, finally, of a paste-like residuum. The microscope will show the milk globules and fat.

I have, at the present time, one under treatment, which will illustrate one form in which they are met with. A lady was sent to me for operation, on account of a doughy thickening under the nipple which was thought to be cancerous. It lay deep in the breast, and its feel was not unlike that of a moderately soft cancerous infiltration. On puncture it yielded a white paste, which was found to consist of milk globules without any admixture whatever of cellular elements. After evacuation of its contents all induration and abnormal swelling disappeared, but in a short time a reaccumulation took place of precisely the same character, the milk globules presenting themselves under the microscope with very little interglobular fluid, showing that the character of the secretion was not caused by its long continuance in the tissues. Should it collect again, I will make a free incision and may possibly remove the affected area.

The occurrence of fluctuation in these cysts will depend upon the more or less fluidity of their contents, and sometimes upon their location. When the contents are thick and pasty, the fluctuation is absent. I have never seen any tendency in these cysts towards malignant degenerations, but nevertheless think it best to subject them to operative measures when they do not yield to puncture, for they are, after all, only another phase of chronic irritation, and chronic irritations may lead to dangerous changes.

Much more common than the milky cysts are the so-called involution cysts which, in my experience, give rise more than any other form of tumefactions to diagnostic and prognostic errors. These cysts are formed by the accumulation in the acini and lacteal ducts, of a serous exudate, in which there occurs broken down epithelium from the lining membrane. Their aetiology is not altogether understood, and they probably arise from irritations of various origins. They differ somewhat in their gross characteristics, some having no wall but that of the lining membrane of the ducts, while others are surrounded by an inflammatory wall. For these reasons they react differently to puncture. When exploring needles are inserted into these cysts the greater number will collapse so completely that after the evacuation of their contents no abnormality can be detected by the closest examination. The seat of the collapsed cyst will then feel exactly like the rest of the breast. In a minority of cases there can be felt, after evacuation, a decided hardness or swelling. I meet with these cases usually in my office consultations. Women come in great alarm on account of one or more firm, small swellings deep in the breast. As a rule, they feel much more like solid than like cystic tumors, and are often irregular in outline. The difficulty of diagnosis may be increased by a location deep in the gland and by the occurrence of several cysts in one or both organs. When such a case comes to me I invariably insert an exploring needle, when a cyst, if present, will reveal itself by the discharge of a dark colored fluid.

Will any one tell me why physicians so rarely use an exploring needle? In just this class of cases I should feel lost with-

out the aid which I get from this little instrument, and yet from the great numbers which come to me with an erroneous diagnosis of cancer, I have been forced to the conclusion that it is practically unknown to a large number of practitioners.

The result of the puncture will determine the diagnosis and indicate the treatment. When all tumefaction disappears with the evacuation of the cyst's contents, we may reassure our patients positively as to a favorable outcome for, with rare exceptions, it is the rule that the trouble will entirely disappear with a few punctures of the needle. I have, however, seen one or two cases in which cysts with this history have been the forerunners of cancer.

A woman once came to me with large cysts in both breasts, which so entirely collapsed on puncture that I could feel, after the evacuation of the fluid, no induration whatever. The glands presented, then, an absolutely normal appearance. She was directed to call again and keep herself under observation, but I did not see her again for more than two years and when I then had the opportunity of examining her, both organs were hopelessly involved in scirrhus growth.

Sometimes an inflammatory tumor of chronic character will develop in the location of a cured cyst. I operated on such a case this year. A lady who had had a small uterine fibroid came to me six years ago with a cyst of the left breast. It was cured by puncture. On presenting herself again last winter I found a cyst of the right breast, which I cured by puncture, and a hard, well defined tumor of the left breast at the place where she had previously had a cyst. This tumor had been several months in developing, but, in the absence of all symptoms of neighborhood

infection, such as adherence of the overlying skin, retraction of nipple, etc., was diagnosed as inflammatory. As an incision into its substance confirmed this view, I contented myself with removing the affected lobe. A subsequent pathological examination at the Detroit Clinical Laboratory established the correctness of the diagnosis.

When the evacuation of the cyst contents does not cause an entire disappearance of the swelling, when it leaves behind a perceptible thickening or an induration, we have to deal with pathological conditions which will cause more anxiety and trouble. The remaining tumefaction may be due either to an inflammation of the wall of the duct or of the outlying connective tissue, or to the presence of a neoplasm, which complicates, if it has not actually caused the development of the cyst. A microscopical examination of the exuded fluid may or may not throw light on the nature of the malady. If inflammatory, it may possibly subside under massage and pressure; if neoplastic, it demands imperatively operative relief. I do not think that the surgeon should delay action very long in these cases if treatment produces no benefit.

It is then a proper case for exploratory incision, thorough examination and radical measures. I had a case a year or two ago with Dr. Campau, of Harrow, Ontario, which illustrates this matter and which caused me a good deal of chagrin. I punctured a cyst in the breast of one of his patients and evacuated a thin, dark colored serum. There remained then a very small, indurated spot, hardly bigger than a small bean. I gave a good prognosis, but it was only a few months after that she came to me with a rapidly grow-

ing cancer and an evident glandular infection which necessitated a very extensive operation. It is possible that the growth in this case preceded the exudation of fluid in the duct, and by producing an irritation, caused it. However that may be, I have learned, by many cases, that cysts in which tumefaction persists after puncture, demand a watchful attention and prompt treatment.

I hardly need to call attention in this connection to those cavities in morbid growths which result from the breaking down of cancerous tissue. The contents of such cavities resemble those of certain abscesses but under the microscope are found to consist of cells more or less degenerated, granular matter, fat globules and pus. They should never deceive the practitioner nor render him doubtful of their true nature, and yet I have seen them, more than once, mistaken for phlegmonous abscesses.

If puncture and the microscopic examination of exuded fluids leave the surgeon in doubt as to the character of any given tumefaction, the question arises whether he should then proceed without further ado to treat the breast as cancerous and to thoroughly remove it, together with the surrounding tissues and glands. For many years I acted on this principle as the only one which could promise good practical results, for reasons which I have already stated. I have found it best of late years to alter my practice, by extending the examination still further by means of an exploratory incision. A cut made deep and wide into the tumor will often relieve doubts by its macroscopic semblance alone, exposing cavities which may have escaped the exploring needle, and showing the gross outlines of structure in the more

solid tissues. If we see the cut surface of a hard tumor of uniform color and consistency and of bulging convex form and strictly defined from the surrounding parts, we might not be able to diagnose it as a fibroid or adenoma or inflammatory mass, but we should feel certain that it was not a scirrhus. If further, we could find no evidences of infection anywhere, we should conclude that it was innocent, and content ourselves with excising the affected lobe, sparing the rest of the gland, the overlying skin and underlying fascia and muscle. If, on the contrary, we discovered on incising a doubtful swelling, a surface concave and retracted, with mottled color and a vague outline melting insensibly into neighboring tissues, if it is attached to the adjoining structures and draws them into itself, and if secondary nodules or enlarged glands indicate a process of infection, we should not hesitate to sacrifice breast, skin, fascia, muscles and glands far and wide, with the hope of saving life.

In hospital practice many surgeons delay the completion of an operation in order to have a rapid examination of frozen sections of portions of the tumor which they have excised for the purpose. I have not myself much faith in the efficacy of this kind of investigation, for, while the method may yield definite results in cases which give the surgeon little doubt, it fails to give us certain information in those which are most perplexing. We rarely are at a loss, after cutting into a tumor, to recognize a typical fibroid or a scirrhus. The cases of doubt are those in which malignant elements are thought to be growing among others of a benign nature, as when a fibroid or adenoma or inflammatory product have formed the nu-

cleus for the development of cancer. A casual hasty examination of segments of such a growth will rarely yield the desired information, though a careful investigation of sections cut from many places in the extirpated organ might throw valuable light on the process.

When in operating we delay the completion of the procedure while awaiting the result of microscopic examination, we should not forget that the reason of so doing is to save as much tissue as may be possible, if the examination should warrant less radical procedures than thorough extirpation. This caution might seem unnecessary, but it was only last summer that I saw an operation in one of the largest eastern hospitals in which this principle seemed to have been lost sight of. A woman was brought into the clinic with some kind of a lump in the breast. The organ was small, and covered so tightly with its integument that the excision of any great portion of the skin would mean either healing by granulation or an extensive plastic operation. The surgeon made at once an oval incision and removed the gland, together with its covering of skin, and then sent the patient out of the room to wait for the microscopic examination before having the operation finished. I waited in the clinic a full half hour but did not see her again nor hear the result. Now if the tumor was benign, all of the integument, at least, should have been saved; if malignant, the underlying muscle, fascia and lymphatic glands should have been removed; if of doubtful nature, as I assumed, the integuments should not have been removed until that doubt had been settled by the microscopic examination, as long as the surgeon relied upon that as a criterion on which to

base his action. It was evident to me that the operator was following a routine and had lost all idea of the purpose of the pathological examination.

Certain inflammatory tumors can, with difficulty, be distinguished from scirrhus by microscopic examination. In fact, their clinical symptoms are of more value in diagnosis than the minute structure. They are all marked by a uniform caking of the whole breast, so that the gland has a feel of even hardness. The skin, however, is not adherent, nor the nipple retracted, nor the axillary glands swollen, but the new inflammatory tissue surrounding the ducts and acini will strangle them, leaving here and there islands of epithelial cells. Sometimes a portion only of the mammary gland is involved, and the diagnosis may become difficult.

In conclusion I will say that no breast ought to be adjudged cancerous without the most thorough examination by all possible methods, but when the surgeon, using his best judgment, after full investigation, has come to the conclusion that he has to deal with a tumor of dangerous tendencies, he should then operate on it so thoroughly as to destroy, if possible, every secondary growth, whether in fascia or muscle, skin or gland. He should assume that the skin above it, the fascia and muscle below and all of the neighboring lymphatic vessels and glands are already infected and should make the operation wide enough and deep enough to take in all of the suspected territory.

We can not, as yet, say that we can in this way cure all cases of the disease, nor even a majority of them, but we may truthfully claim to have had a success in a very large minority—which our predecessors in surgery never achieved.

I have now many patients who are living, without recurrences, after three, five and ten years, and feel justified therefore, in spite of many discouraging failures, in recommending the operation as the only treatment which, as yet, has shown a fair measure of success.

Above all things, we should try to keep our patients out of the hands of the charlatans, who inflict upon them indescribable tortures which, in their very nature, cannot possibly be of service.

#### DISCUSSION.

J. K. GAILEY, Detroit: I do not know that I have anything to discuss in this matter, because it seems to be very clear and concise in every way, and coincides with my opinion. My experience with cysts of the breasts has not been very extensive, but I have found in all cases that exploration and care and watchful observation is the proper thing; and a great many conditions can be bettered, and the future of the patient very much improved. I have nothing more to say than that I approve of everything that has been said in the paper. I cannot discuss it in any way except to approve of it. Wherever growths prove to be malignant they should be removed very thoroughly. I have removed tumors that have been malignant, and with no recurrence as far as I have ever heard. In others they have been too far advanced before operating, delayed too long, perhaps from some cause as mentioned in the doctor's paper. I know wherever tumors are operated on early the advantages are great, and the liability of their recurrence is very rare. I have nothing more to say except that I appreciate very much this matter of bringing out the exploring method. I myself must acknowledge I have not used an exploring needle as much as I should, and I think that will be the experience of a great many physicians. The exploring needle is a very proper thing to rely upon in a great many instances, and I think that outside of tumors of the breast the exploring needle should be used a great deal more than it is.

H. R. VARNEY, Detroit: I will rise to thank the doctor for the privilege of hearing this paper, and to raise a note of warning. I am

a dermatologist, and one who has had some experience with the X-rays in some of the doctor's cases, all of which have been recurrent cases; but I rise, as I say, to give a note of warning in these cases that are coming to us as specialists in this line. I do not think in my experience I have allowed the ray to substitute in any particular for the knife; these cases have been turned to the surgeon. Cases were coming to us all the time, that will submit to the ray, but will not submit to the knife, yet when we lead them to realize that nothing can be hoped for from the ray when in the malignant condition, they are very easily led to see the need to remove entirely. Therefore, I rise to offer a word of warning concerning these cases, but I believe that application of the ray after removal, with recurrence, is a treatment worth trying.

ORVILLE W. OWEN, Detroit: In regard to the use of the X-ray in nodules of a cancerous formation, we are in our infancy, but I believe that the time has come when the knife should never be used until the X-ray has been thoroughly and completely tried. The surgeons will fight on that proposition.

The surgeon will not allow us to use the X-ray at the earlier stages of the disease. I use it correctly when I say the earlier stages of the case. It seems too new and startling a proposition—compared with what we have had in the past—that we never should use the knife until the patient has had a thorough X-ray treatment in every case. I have myself had occasion to use the X-ray, and have cured cases where it seemed almost impossible to effect any change. Now, one thing you ought to impress upon your patients, when you send them to try the X-ray, and that is that it is a long and slow and tedious proceeding; that there is nothing hasty in it; and that you must use the X-ray for a long time before you get any appreciable benefit from it. The knife, of course, is quick in action, but the results are not any better, nor as good as the X-ray. But the point we find mostly to contend with is that the patients are afraid to stay, and will not stay to take their treatment as they ought to, and take it for a long time. There is the whole question of using the X-ray to-day in any case outside of the taking of pictures,—is the long continued use of the X-ray; not a high current, a high frequency too, and to a burning, but a long, slow, continued application of a mild current for a long period of time. It is not the burn that cures. It is the

absorption of something, we do not know what it is,—the X-ray, the unknown quantity, and there is not a man in the world that can tell you what it is that does it. About the high frequency coil and the low frequency, when you come to take the study and watch the symptoms you will find that you will get better results with the low tube and long application and without the burn. And you will find also that your cancer or your lupus or other malignant disease will disappear under that, but if you expect to start out, and have your patient come for four or five treatments and expect to do the thing good, you cannot do it. But what I would like to most impress upon you is to tell your patients when they come to the X-ray, they must expect to stay a long, long time, and that for a long time they will see no improvement; for a long time there will be absolutely no change of the morbid growth in any way, shape or form, but all of a sudden it will commence to disappear, and it will disappear like magic when it does.

A. L. SEELEY, Mayville: I will give you an account of the method I have been pursuing for the past ten years. When I have made the diagnosis, and have come to the conclusion that a cancer of the breast exists, which diagnosis I make in the method illustrated by Dr. McGraw; when I find an enlargement of the glands and an indurated mass; when I cut in the breast and find a tumor, I have followed this method: I make a thorough dissection, amputate the breast; make a thorough dissection of the glands, and then do not close the wound, but instead place upon the wound a paste known as Bogart's Paste, the principal part of which is chloride of zinc, with a small addition of arsenious acid. I have left that paste upon the open wound for 24 hours, and am always surprised what little pain and discomfort is produced by the paste. I do not think I have given more than quarter grain doses of morphine to keep the patient quiet, and I know in some cases that has been superfluous. I never give more than three or four doses. It makes an ugly wound. But it heals. In one case it was four inches one way and nine inches the other, and it seemed almost impossible for that wound to heal with so little skin covering, but it did so. The patient was 65 years old. There was a recurrence in this case, the only case I have had a recurrence in. The recurrence came about the third year. The recurrence was not in the cicatrix, it was in the other breast. You will find by applying the paste

you will get just what you get in the X-ray treatment.

I disagree a little with Dr. Owen, who says we do not get the result from the burn. I think that is where we get the result. I think the burning with the X-ray produces the result we get. We bring new blood to the part, and in some way we get the result, and I think we do not get a good result unless we do get the burn. Taking the plaster off you will find that there are places as far around as the spine, even on the other breast that sloughs off and comes out. You will have sloughs as clean cut as if cut out. I have had recurrences in the wound before the wound had healed—in one case. That is, the cancer commenced to grow again, when I have had to apply a small plaster the second time. But in some of the cases there has been no recurrence even after years. I certainly shall continue that method of treatment until I find something better. Of course, we all know that we get good results with the use of arsenious paste in epithelioma. And we get less scarring, and a better looking result than we do from the knife, in a good many cases. The wound heals slower, more chance for granulation tissue to follow in the wound.

SCHUYLER C. GRAVES, Grand Rapids: This matter of tumors of the breast has been very interesting to me, and I want to congratulate Dr. McGraw upon the stand he has taken. I think Dr. McGraw is a step nearer the ideal surgeon to-day than he was before he read this paper. It is surely the province of the surgeon to mutilate people as little as possible. This promiscuous amputation of the breast for everything should be tabooed. He didn't mention the fact, however, of the X-ray treatment of cancer, and I would like to speak a moment upon that subject. I will relate a case which will bring the matter to your attention more satisfactorily than in any other way. I had occasion to remove a carcinomatous breast a year ago this summer. The breast was removed, but in the course of six months local recurrence took place. Three or four nodules sprang up in the neighborhood of the scar, and commenced to grow with considerable rapidity. This family lived at Pentwater. I knew this fact, and I told the wife that the nodules had better be removed. She went home, however, and I saw nothing more of her for some time. I finally was telegraphed to come and see her husband and while there she showed me her scar. Those nodules had all disappeared. She had gone to Dr. Dodge, at Big Rapids, and he

had applied this treatment of the X-ray. Now, in that case, the local recurrence had certainly been cured, or practically cured. Since then I have learned that the nodules had all disappeared, so that in this case, at least, a cure had been effected. That speaks volumes in favor of the X-ray treatment.

F. W. ROBBINS, Detroit: There are two points I wish to mention in the matter of diagnosis, first that of a growth I have seen in one or two cases at the junction of the areola and white skin around the nipple. A hard, thickened induration was removed, and upon recurrence was again removed, and again recurred, and it looked very much like epithelioma. I just mention it so that we can keep in mind the fact that it is possible for a keloid (?) to have its origin in this vicinity that will simulate so closely epithelioma, that one has to be very careful in diagnosis for fear of amputating the breast for what is supposed to be epithelioma, when keloid exists. Another thing: I am impressed with the fact that trauma has a decided relationship to the formation and production or growth of carcinoma of the breast. In one or two cases, I have seen comparatively young people, below the age of thirty, where injury or contusion has been produced upon the breast and within two or three months carcinoma developed. It seems to me that trauma, in connection with any growth in the breast even in a person under thirty years, should lead one to consider very closely the possibility of malignancy. I say this very feelingly, because I lost a patient some years ago by not removing thoroughly a carcinoma of the breast, because I did not believe it possible it was carcinoma of the breast, but it was. She died from it later, as the result of being struck in the breast by a thill or the shaft of a buggy when alighting from a street car. It was followed within two or three months by growths which proved to be carcinoma.

A. N. COLLINS, Detroit: For my part I can agree most fully with Dr. McGraw, in his conclusion in the handling of these malignant and non-malignant growths, which I believe is a great advance over the idea that all breasts ought to be removed entirely that contain lumps. But here we are confronted to-day with an indecision, where some advocate a complete removal of the breast when we determine it is malignant, and others advocate the submission of them to the X-ray. That situation of uncertainty is very unfortunate for us and very unfortunate also for the patient.

I would like to ask Dr. Owen how long he considers a fair trial of the X-ray to cure, before it is subjected to the knife. Before he answers that question I would like to remind him and others that after one year, as a rule, the chances of elimination of these growths by any means is very slim indeed. Oftentimes these growths have run from six to nine months before the surgeon's attention is called to them. Then, are we to try the X-ray another six or nine months? Then the golden moment is past and our patient is bound to die. I firmly believe with Dr. McGraw that just so soon as we determine that we have a malignant growth of the breast the X-ray has not demonstrated itself to that point where we are justified in delaying the most complete ablation of all the tissues wherein those seeds could be retained. Now, if Dr. Owen will kindly explain how long he deems a proper time for the X-ray to be tested, perhaps we can get to a point where when that question confronts us, we will know what to do.

O. W. OWEN, Detroit: Perhaps I can answer that best by reciting a case. On the 15th day of last May, cancer of the breast was diagnosed. The tumor extended from the median line of the sternum, and all of the glands were enlarged. It was diagnosed as cancer by four surgeons of this city. I put her under the X-ray treatment daily. At the end of the fifth week she came to me one day in the most intense pain, almost screaming. She said she would not allow me to give her but two days more of treatment. I had no burn. I do not want burns, ever, in the removal of cancer of the breast. I gave her a very long treatment with the static tube. She went home. She felt something give way under her arm, and she came right up to me. The glands under the arm had been reduced in size one-half. I discharged her on the 15th day of September after two surgeons had examined her, absolutely cured. Her affected breast was as flaccid as the other side.

T. A. McGRAW, Detroit: I will say this about the X-ray: I regard it as yet entirely experimental. I have sent a good many cases to some experts here, and I am sorry to say that I have not yet had one that was in any way cured. When they demonstrate it on some of these recurrent cases to my satisfaction I shall be glad to say a word in favor of it.

## MODIFIED MILK FOR THE BABIES OF DETROIT.\*

COLLINS H. JOHNSTON,  
Grand Rapids.

The question has so often been asked how Grand Rapids came to possess a Walker-Gordon milk laboratory that I thought a brief account of its origin would be of interest to the section and especially to the members from Detroit, many of whom I know have long wished for a similar laboratory in this city.

I began to teach mothers in Grand Rapids how to modify milk at home for their babies in 1894, and since that time have rarely, if ever, prescribed any other form of food for healthy artificially fed infants before their tenth month. With the exercise of great care and considerable labor, fairly good results may often thus be obtained; but there are many obstacles in the way of perfect success with the home modification of cows' milk. In the first place, it is difficult to obtain a fresh, clean milk. Many, perhaps more than two-thirds, of the dairymen furnish milk which contains from five hundred thousand to several millions of bacteria per cubic centimeter, and which is rich in deposits of filth when allowed to stand a few hours. Much of the milk sold does not necessarily directly cause disease in infants, but is probably responsible for a good deal of colic and indigestion.

Another objection to home modification is the uncertainty of the strength of the cream used. The amount of fat

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obtained by setting milk in pans for a certain number of hours for the raising of cream by gravity is subject to considerable variation, and there is also no uniformity in the cream offered for sale by most of the dealers. Rotch says that on four successive days he ordered of a reputable dairyman in New York an unvarying cream for home modification of milk for a sick infant. This cream he had tested each day with the result of finding a variation in the fat percentage of from ten to twenty-eight per cent., which, of course, would preclude any possibility of obtaining an unvarying amount of fat in the food given to the patient. Freeman has also told us that when milk is set the great majority of the bacteria rises with the cream, leaving the separated milk comparatively free. Even when a good milk and cream of known richness is obtained, the preparation of the food requires such an amount of time and attention to details that many mothers are unable to make it.

In the spring of 1897 I succeeded in interesting Mr. Ira O. Johnson, one of the leading dairymen of our city, in the subject of modified milk, and he enthusiastically entered upon a study of its preparation as described in Rotch's and Holt's text books. Mr. Johnson had for several years made a careful study of modern methods of handling milk, and but few, if any, changes in the conduct of his business were necessary to enable him to produce a high-grade of clean milk. The details of its modification for the percentage feeding of infants were soon mastered by him, and for two and one-half years accurately compounded milk of as good a quality as could be obtained anywhere was dispensed on physicians' prescriptions to the infants of Grand Rapids

and vicinity. Several of my patients, however, who spent their summers at the seashore and obtained milk from the Boston and New York laboratories conversed with the laboratory officials on the subject. The latter were, of course, surprised to learn that modified milk was being dispensed in Grand Rapids and naturally were inclined to doubt its reliability. The question was frequently asked me, therefore, was our product in every respect similar to that of the Walker-Gordon laboratories. The situation was a most serious one for me to face, for if any of the infants to whom our milk was given were found to have suffered from mal-nutrition or lack of development as a result of improperly modified milk the consequences might have been most disastrous. It was occasionally noticed, also, that a sediment was found in our milk which was never present in that of the Walker-Gordon laboratories. This we afterwards learned was due to the fact that the sugar was added in bulk after the milk was modified and a small portion frequently precipitated, whereas in the Walker-Gordon laboratories the sugar is first dissolved in water, thereby securing a more perfect solution. I also feared that some consideration might be paid to the mineral constituents of cows' milk during its modification by the Walker-Gordon people which was not spoken of in the literature, and that in this respect our product might be at fault, although both Holt and Rotch assured me that as far as they knew such was not the case. Mr. Johnson also was of the opinion that he did not have a legal right to use the words, "Modified milk," upon his store front and in advertising the products of his laboratory.

After some correspondence with the

Boston laboratory Mr. Johnson therefore went to Boston in the fall of 1899 for a couple of weeks, and after demonstrating by rigid examination that he was in every respect qualified for the work, made arrangements to represent the Walker-Gordon people in Western Michigan. In the winter of 1900 he took an eight weeks' course in bacteriology with Professor Marshall at the Agricultural College in Lansing, and it is safe to say that there are few milk laboratories in the country better equipped for doing good work than the one in Grand Rapids.

The methods of producing and handling the milk now are essentially the same as used in 1897. The herd consists of about sixty-five cows which are tested with tuberculin once or twice a year. Their diet is composed of wheat bran, corn, oats, ensilage, hay and grass, which is quite uniform throughout the year, and as fresh cows are brought in as regularly as possible, the milk has a constancy of composition not otherwise obtained. The cows are groomed each day, and just before milking their udders are washed off thoroughly with clean, warm water and wiped with a dry, clean towel. The hands of the milker are clean, and he wears a suit of clothes that are used only when milking. The milk pails, bottles and every utensil with which the milk comes in contact are washed with warm water and sterilized in steam for forty minutes. When drawn, the milk is immediately carried to the milk room and at once strained, aerated and cooled down to between 35 and 39 degrees Fahrenheit. For this purpose artificial refrigeration is necessary. There is no development whatever of the bacillus lacticus, which is the principal germ causing sour milk, at 39

degrees Fahrenheit, whereas the lowest temperature that can be obtained in an ordinary refrigerator is 40 to 45 degrees.

The milk designed for modification is then passed through a Stockholm cream separator, making 6,800 revolutions a minute. This serves three purposes: it yields a cream of almost constant percentage of fat; it removes all dirt that may have gained access to the milk from unavoidable causes, and it gives a clean, skimmed milk practically free from fat. Another advantage of the separator is that it furnishes a perfectly fresh cream instead of one twelve to twenty-four hours old, as is obtained in the common gravity process. In the feeding of infants cream more than twelve hours old should never be employed. No better idea of the rigid cleanliness with which this milk is handled can be had than by observing the small amount of extraneous matter found in the bowl of the separator after the milk of twenty-five or thirty cows has passed through it, and then observing the amount of filth after the separation of the same quantity of milk from the ordinary dairyman, in which I have found hair, manure, pieces of insects, earth, thread, blood, pus and bacteria.

Two qualities of milk are sold, one for eight cents a quart and the other for twelve. The eight cent milk is from a herd of fifty cows, many of which are Jerseys, and frequently runs from 4.50 to 5 per cent. fat. It is not put through the separator. The twelve cent milk is obtained from a herd of fifteen native cows, good, healthy, common animals, principally Durhams and Holsteins. Jerseys are of too nervous a temperament and too easily excited, their milk supply thereby becoming too frequently dis-

turbed, to be used for infant feeding. Inasmuch as the greater number of the germs contained in the milk of a healthy cow are those which work up the excretory ducts from the outside of the teat, the first four ounces of milk from each quarter of the udder are rejected, and experience shows that most if not all of the germs are thereby washed out. The remainder of the milk drawn contains practically no bacteria whatever. Professor Marshall drew from thirty different quarters of cows' udders by means of sterile glass tubes, after milking out a little of the fore-milk, thirty different samples, thirteen of which at the end of six months, placed at the temperature of the living room, had not undergone any appreciable change. Mr. Johnson has several times shipped samples of this milk, which he calls his "nursery milk," to New York by express, and it has returned to the Bacteriological Laboratory of the Agricultural College at Lansing perfectly sweet. It is sold for twelve cents a quart. This is also the milk used for modification.

Of course it is impossible to prevent some contamination of milk in transporting it to the consumer, so that some bacteria are found when it is delivered. That this contamination is reduced to a minimum is evident from the following analyses which were made in the bacteriological laboratory of the State Agricultural College. The table gives the germ contents of the various samples studied.

	Nursery milk. No. of Bac- teria per cc.	Eight-cent milk. No. of Bac- teria per cc.	Milk drawn under ordi- nary con- ditions. No. of Bac- teria per cc.
Sample I. ....	1,180	2,160	30,100
Sample II. ....	240	960	1,516,900
Sample III. ....	240	1,680	1,225,000
Sample IV. ....	320	480	474,250
Sample V. ....	400	640	1,260,000
Sample VI. ....	400	1,280	210,000
Sample VII. ....	320	1,760	
Sample VIII. ....	320	4,140	
Sample IX. ....	120	32,200	

The specimens in columns one and two were shipped from Grand Rapids to Lansing in little refrigerators at a temperature of 50 to 60 degrees, and were twenty-four hours old when examined. Marshall has found that the ratio of increase of the bacteria in milk kept at a temperature of 75 to 80 degrees Fahrenheit is from fifty to one hundred times greater than with milk kept at a temperature of 60 degrees, so that it is fair to presume that the bacteria in these samples were many times less in number when the milk was fresh.

There are now fourteen Walker-Gordon laboratories in the United States, three in Canada and one in London, England. Six of those in the United States are operated by the Walker-Gordon company; the others are licensed. The Grand Rapids laboratory belongs to the latter class and pays to the Walker-Gordon company a royalty of five cents per day for each child supplied with modified milk. The laboratory charges five cents per bottle for the milk with a minimum charge of twenty-five cents per day. Where six, eight or ten feedings are ordered I frequently direct that the milk be delivered in five bottles so that the cost is but 25 cents per day, instead of 30, 40 or 50 cents. Modified milk is therefore a somewhat more expensive dietary for infants than patent foods, but I frequently tell my patients that it costs much less than doctor's bills. One great advantage of the laboratory method is that it gives the physician much better control of an infant than when the food is prepared at home, no matter what its composition. One of the chief causes of sickness among babies is over-feeding, causing all sorts of gastric and intestinal troubles. Colic and disturbances of the digestive tract do not

often come from teething, but usually from too much food or too frequent feeding; and when I now direct a mother to give her infant seven feedings of four ounces each, I am quite sure that the baby will not be fed eight or nine times a day, or given four and one-half or five ounces at a meal, for the laboratory will not under any conditions change the milk order without instructions from the physician.

It is quite impossible in the time at my disposal to go very deeply into the theory of modified milk or the percentage feeding of infants. I believe, however, that no physician will resort to any other method of feeding healthy babies after once becoming accustomed to its use. There is probably no one here who has not already modified cow's milk many times in order to get rid of the large, tough curds which give rise to so much digestive disturbance in artificially-fed babies. Cow's milk contains about three times as much proteids as human milk. The proteids are of two kinds: lactalbumen, which is soluble, noncoaguable, and easily digested, and caseinogen, which is easily coagulated and which makes undiluted cow's milk so difficult of digestion for infants. The coaguable caseinogen comprises only one-third of the total proteids contained in mother's milk, but forms five-sixths of the proteids of cow's milk, so that the latter contains about seven times as much of this objectionable coagulating casein as human milk. The simplest plan of trying to render cow's milk suitable for infants is to dilute it with water. This procedure renders the curd less dense; but it also reduces the amount of fat and sugar below that required for the infant's proper de-

velopment. A certain amount of sugar or carbo-hydrate is necessary for nutrition and also for the production of heat. Fats are necessary for cellular growth and without a proper amount in its food the infant's development is retarded. So that it becomes necessary to add cream and sugar to the diluted cow's milk to make it approximate mother's milk in composition. As cow's milk is also relatively more acid than human milk, an alkali must also be added to it. For many years physicians have made use of mixtures of milk, cream, sugar, water and lime water and have designated the number of ounces of each to be used to secure a food corresponding to mother's milk, but on account of the uncertain strength of some of the constituents the composition of such mixtures is very variable.

Dr. Rotch has taught the profession that a much more constant product can be obtained if we specify the per cent. of fat, sugar, and casein we desire, and it is for the purpose of providing a place where these modifications of cow's milk may be made with scientific precision and our patients regularly supplied with a perfectly clean food, that the Walker-Gordon milk laboratories were established.

Experience has also shown that no one formula is suitable for an infant at all ages or for all infants at any one age. In the early weeks of life, in conditions of ill health, lowered vitality, imperfect development, and so forth, a much weaker food must be used than later. When milk does disagree the ingredient causing the trouble may be in one case the fat, in another the casein, and in another the carbo-hydrate. A great advantage of the laboratory is that in all such cases the food can be easily and accurately

adapted to the infant's digestive capacity.

Many physicians believe that decoctions of wheat, oats, barley, rice and so forth are useful additions to cow's milk for the purpose of attenuating the casein and rendering the milk more digestible. This is no doubt sometimes the case in infants whose digestive powers are below normal, and such diluents are used at the laboratory instead of water when a physician so directs. Some also believe that the fat of cow's milk is altered in some unknown way in passing through the centrifuge. In filling the prescriptions of such physicians gravity cream is used if requested.

Rotch says: "It is well that this latter statement should be noted, as physicians are so apt to think that only separated milk and cream are used at the laboratories and that the food is always sterilized or is always made alkaline with lime water. This is not so, and it should be thoroughly understood that the laboratories are ready to provide whatever a physician orders and in whatever way he orders, and that they are not allowed to do anything else, either to prescribe, to change the prescription or to sell a modified milk preparation without a physician's prescription—that is, the laboratory is merely an instrument in the hands of the physician and is in no way responsible for the results obtained from the feeding except so far as freshness of material and exactness of combination are concerned."

#### SOME CONSIDERATIONS UPON INFANT FEEDING.\*

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Grand Rapids.

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For the practitioner of general medicine, there is no more reasonable and necessary subject for consideration than that of infant feeding. When we reflect upon the fact that about 25 per cent. of all deaths occur among children under one year of age, that in our own state alone an infant dies on an average of nearly every hour, and that a high percentage of this mortality is the result of improper food, it makes us realize that we have before us a problem, the solution of which is momentous and is either difficult or neglected.

The field in this department of preventive medicine is large, for it is estimated that 75 per cent. of the children in the well-to-do homes have to be artificially fed. The physician can perform no nobler work than that of compensating the misfortune that obtains when a child is unable to receive nourishment from, and thrive upon the human breast. The feeding of infants is a task, the results of which affect every decade of life, every stratum of society, every avenue of human endeavor, and are transmitted through the generations.

It is perhaps unnecessary to state that the profession is agreed that cows' milk, modified in some way, is the preparation upon which we must depend to nourish this army of little orphans who, in a few years, ought to become foremost in the ranks of our body politic. But the great obstacle that meets us in every turn of the road is, how to obtain pure milk, without which we can make no headway whatever. Pure milk to the paediatrician to-day means absolutely more than it did a few years ago, just as clean hands to the surgeon means more than it did in the time, when a simple wash with soap

and water, completed his toilet preparatory to an operation. And if in the scientific light of the 20th century, the surgeon were to perform, for instance, a gastro-enterostomy, without taking every precaution against infecting his patient, he would be very justly criticized by and ostracized from his professional colleagues. But every hour of the day is the general practitioner infecting the infantile gastro-intestinal tract with impure milk, and little or no complaint is ever entertained or expressed. Fortunately or unfortunately, death does not follow so quickly in one case as in the other, for a diatetically infected infant may live a long time. And until a crusade for pure milk sweeps over the entire land and reaches every dairy farm in operation, this wholesale infanticide will continue.

It seems to the writer that the nearest to the ideal method of obtaining pure milk has been approached by the Walker-Gordon Laboratory Co., which was organized in Boston a few years ago, and is now operating in sixteen cities in this country and Canada. Our profession owes a great deal to this company; for, through its management, it is possible to obtain a practically pure milk for infants' feeding. The dairy farms connected with this company are all managed in the same way. They are situated at reasonably safe distances from sources of contamination. The soil, drainage, elevation, and other facilities for successful grazing are all taken into consideration, and the barns and other buildings are carefully located and scrupulously clean. A physician examines the employes at regular intervals, and the employes are required to be educated commensurate with the character of their work. The milkmen are required

to make almost as much preparation before milking their cows as a surgeon does before making an operation. The milk received in sterilized and partially covered pails is strained, separated and rapidly cooled to a temperature of 40° Fahr., thus immediately inhibiting bacterial growth. The cows are examined every two weeks by a veterinary surgeon, and before admission are given the tuberculin test. Bacteriological counts are made from time to time and show that milk obtained in this way may contain only 100 germs per cubic centimeter. This milk will keep sweet for many days, and is frequently sent from this country to Europe to be used by returning travelers, and I have seen it put upon ocean liners in New York City to be used by travelers crossing the Atlantic. There is scarcely a summer resort in this country, west or south of Chicago, that cannot be supplied with milk from these farms.

Now the standard which has been raised, and maintained by this company is none too high for us to demand of every individual engaged in supplying milk to cities. We must demand pure milk, whether that milk is for use in the nursery or for general consumption. In the City of Grand Rapids we are fortunate enough to have a Walker-Gordon milk laboratory in successful operation. Every day is milk being shipped to different parts of the State; and I would have no hesitancy in undertaking to feed a Detroit baby from this laboratory, even during the hottest months of the year. I have done it successfully at shorter distances. The farm is situated about ten miles from Grand Rapids, and is under the management of Ira Johnson, a competent, scientific and trustworthy dairyman, who in

1899 took a training in Boston and obtained a license to operate a farm and milk laboratory. This farm is managed as has been described above; and the laboratory is equipped with all the necessary apparatus for modifying milk. A number of physicians avail themselves of this laboratory, and many infants' lives are saved every year. In short, the production of milk from this farm is a model that every dairyman ought to be compelled to follow. But unfortunately only a small percentage of infants receive milk from this laboratory, the cost being from 25 to 50 cents per day, placing it beyond the reach of a great majority, and the profession has not, as it might have done, and should have done, interested itself and educated itself in the percentage method of prescribing milk.

In our city, while the control of the milk is presumably under the Board of Health, yet it virtually is not. The Common Council elects for one year a milk inspector, empowers him to prosecute its ordinances which regulate the selling and examining of milk, the granting of licenses, and the inspection of herds and dairies. Over 4,000 cows are employed in producing milk for the City of Grand Rapids, while about 450 licenses are granted annually. It is obvious that no individual milk inspector can thoroughly and adequately make the necessary inspections, and tests entailed in the supervision of such a large enterprise.

It seems to the writer that the Board of Health should directly regulate the milk supply to every city, and the following plan has suggested itself to him as feasible, with modifications of course, according to the size of the city and other considerations.

First.—Have the Common Council set apart out of the city funds a milk-fund budget called the milk budget.

Second.—Have the Common Council appoint a board of milk commissioners, which board shall consist of seven members, viz., the Mayor, the Health Officer and the City Physician, all ex-officio, a Veterinary Surgeon, a Chemist, Bacteriologist and a Dairyman.

Third.—Have the Health Officer President or the Superintendent of this Board.

Fourth.—Have this Board meet at stated intervals and examine every applicant who applies for a license to supply milk to the city.

Fifth.—Empower this Board to make all examinations, inspections and testings that are necessary for the production of pure milk, availing itself of all the necessary assistants, and have it compensated adequately from the proceeds of the milk fund.

Under the supervision of the City Physician all poor infants of the city could be fed from a modified milk laboratory, and the adult poor could be provided with pure milk. So far as I know there is not a modified milk laboratory in the world thus established for distributing milk to the poor, and yet our cities expend an enormous amount every year for the care of its poor in other ways.

The percentage feeding of infants is a method that has been before the profession for some time; and yet seems to be very little understood by many physicians even in our large cities. It is receiving more attention every day, however, and especially from paediatricians. It is so simple, so accurate, and subject to such variations, that when one becomes at all familiar with its use, he hates to attempt to feed a child in any other way. When the milk

arrives at the laboratory for modification, it is divided into its constituent parts, fats and proteids, or cream and skim milk. This is usually done at the farm by a milk separator. A 20 per cent. solution of milk-sugar in distilled water is used to supply the proper amount of sugar. Lime water or soda is used to give any degree of alkalinity the prescribing physician may desire. It can be heated to any degree of temperature, or for any length of time, and cereals or artificial foods may be added. In short, a physician can obtain from this laboratory any preparation he prescribes. He simply writes upon the prescription blank the percentage of the different products, and the prescription is filled in the laboratory with the same accuracy that is employed in a modern drug store.

Now as a guide to the beginner who prescribes modified milk, the Company has issued an abstract based upon the feeding of a large number of infants; and it gives the average percentage in the different weeks of life, and the amount used at each feeding, which is a great help to the physician at first; but he will soon learn that these percentages have to be subjected to all kinds of variations, and that every case is a law unto itself.

In concluding these remarks, let us state that the crusade for pure milk must receive its impetus from the medical profession; that every physician as a guardian of public health has a duty to interest himself in, and promote every measure, towards procuring pure milk for the masses; that the percentage method of prescribing modified milk from the Walker-Gordon laboratories is a scientific, practicable and accurate plan of

feeding infants; and finally, that the time has come when we cannot hypothesize the obligation we owe to our infants, by allowing them to be fed upon impure milk, commercially prepared artificial foods, and those at the hands of unskilled mothers and ignorant nurses.

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#### DISCUSSION OF JOHNSTON & CAMPBELL'S PAPERS.

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V. C. VAUGHAN, Ann Arbor: Dr. Johnston and Dr. Campbell are to be congratulated upon their papers, and the people of Grand Rapids are to be congratulated upon having such live wide-awake doctors in the city as they are. As somebody has said, about one-fourth of all the children born to the civilized world die before they reach five years of age; the percentage is a little more than one-fourth, and the greatest causes of death are disturbances of digestion, of milk poison, that is what it is—milk poison. Now if we should continue to feed children milk after they have manifested all the symptoms of cholera infantum, we would be guilty of giving them poison at the same time that they were dying from poison.

I want to say that the first attempt to furnish pure milk, so far as I know, was made to furnish the city of Detroit with pure milk in 1884, nearly twenty years ago, by a company at Northport. There is not a single new principle in the Walker-Gordon method of preparing milk, and if anybody wants to pay the Walker-Gordon people a royalty upon their method of preparing the milk, it is all right. The examination of cows we knew all about, and we knew the desirability of doing it long before we heard of the Walker-Gordon laboratory, and we knew that it was necessary to keep milk at a low temperature, in order to prevent the growth of germs, long before we heard of the Walker-Gordon people; we knew that, but something that the medical profession does not thoroughly appreciate, not only in regard to the feeding of infants but with regard to the feeding of all our city, is that we have certain definite food principles, we have fats and so forth, and it is necessary to get the proper amount of each substance. The Walker-Gordon people have organized their method and given these prescriptions, and if any good man will take the time to work it out he can work it out as well as they are doing it in this book; they have simply made the

method easy, that is all there is to it. I am not finding fault with them for it, because it was a proper thing for somebody to do, but please don't understand that they have made any great discovery in infant feeding.

There is danger of going into error on this question; there is no modification you can make of cows' milk that makes it woman's milk, absolutely none; diluting it and adding sugar to it does not make it woman's milk. There is this danger to be considered: people seem to think if they can get the Walker-Gordon milk it is not necessary to nurse the child—that is all wrong. Dr. Johnston and Dr. Campbell understand all these things, but they did not have time to emphasize them in their paper. I am not telling them anything new whatever.

There is an idea also that if you obtain your cream by the centrifuge, you get a much better cream than you do by the old gravity method. Let us understand this matter: It is a proper thing to run milk that is going to be fed to children through a centrifuge, not because you get a better cream but because you get out the particles of manure that Dr. Johnston talked about, you get out what you would call the slime. The cream separated by the centrifuge process contains more bacteria than the cream separated by the old gravity process. The cream when you put it into a centrifuge acts as a drag net, with the exception of some of the heavier bacilli, such as the tubercle bacilli, and the cream really contains more germs when separated by this process than by the old gravity process.

The exact amounts of sugar and fat fed to a baby are of importance since deficiency of either may result in mal-nutrition.

C. G. JENNINGS, Detroit: I think also, with Dr. Vaughan, that the section is to be congratulated upon having presented to it the papers of Dr. Johnston and Dr. Campbell, and for the practical demonstration by Mr. Johnston of the method of modifying milk. Dr. Vaughan has brought forward also the fact that the method employed by the Walker-Gordon Company is not a method developed by them, but I must confess that the Walker-Gordon Company is entitled to a good deal of credit, that is, if we can give a commercial company credit for anything that brings about a good result in the community. The fact of clean milk is one of the most important factors in infant nutrition or infant feeding, and I think it is to that that the Walker-Gordon Company's success is so largely due, for they have emphasized it and have practically demonstrated it by the organization of properly equipped modern dairies, and they have brought to the attention of the profession and public what perhaps they knew before. As Dr. Vaughan said, it is not a new thought that clean milk is necessary, but they have emphasized it in such a way that it has been of the greatest value to the profession, and I believe to communities in general. I believe that infant feeding at the present time is to quite an extent, and has been

to quite an extent, dependent upon the Walker-Gordon work.

Now as to the objections that have been raised to the Walker-Gordon milk, while there are theoretical objections, there is the expense of the Walker-Gordon milk to be considered. People who can afford it will try it and those that cannot will not. The objection as to separating the cream I do not think holds good practically; perhaps it does not separate the cream, so far as its digestibility is concerned, any better, but it is of equal value to gravity cream. The other objections are insignificant, and there are great advantages in milk prepared in this way; one of the principal ones, I think, is its convenience to the practitioner. Concerning the modification of milk from ordinary dairies the difficulty is its unequal composition, and the difficulty with cream is the fact that we cannot get uniform cream. With the Walker-Gordon Company, or any company that will give us a clean dairy, we will get clean milk, and clean milk in the modern acceptation of the term will be of benefit.

A MEMBER: This question seems to have two sides. I agree with Dr. Vaughan in regard to the originality of the matter, and I agree with him in regard to the expense. I have been having some difficulty along this line of infant feeding recently. How long this milk will keep when shipped, I haven't heard anybody say, but it is necessary that it keep some time, otherwise it would not be a great advantage to use it. Here is the trouble with dairy milk, I find it so in my town and I am raising three infants now by artificial feeding; you can make all the manipulations of cows' milk you please, but you cannot get it like the mother's by any means, and if it is deficient we must fit it to the child whether we use a commercial milk or a home milk. I have found this trouble in Sturgis; I got a milk that was not contaminated, I tried the feeding of one infant on this milk and I modified it according to the best authors, but my infant kept getting poorer all the time, and I manipulated the feeding of that child for ten days upon the milk that I was getting in Sturgis; with all of that manipulating my infant was losing flesh and was literally starving. I had to desert the milk and I am raising the child to-day on an artificial food, and it is doing well and getting fat; and in that case the artificial food must have all the credit. We know from our dairymen that milk is not pure and clean; they do not wash the udders of the cows; this milk comes into the market impure and then the physician is obliged to feed that impure milk and by modification get the best result he can; but it is impossible to make a success if you are placed in that position, and you have to take some other means, and I take the prepared foods. In the case I cited the child is prospering; the credit is not due to the food entirely, but it is due to the fact that I cannot get pure milk; the advantage of the laboratory is that you do get milk as pure as it can be made.

A MEMBER: We all recognize the fact that so large a proportion of our infants die, and we know that the cause is impure milk, and milk not adapted to the individual child. The impurity of milk lies partly at our doors as physicians, and the only way that we can eradicate the danger of such impurity is to force our city Boards of Health to furnish us with pure milk. The dairymen are ignorant and they are stubborn, and they must be forced.

In regard to milk, modified to suit an individual child, we cannot take Hill's formula and Roach's and the Walker-Gordon formulæ, and put so much milk and so much cream and so much water together and expect the individual to thrive upon it, but we must adapt the formula to the child. We must have the proper percentages of fat and carbo-hydrates and the sugar in that milk, but the individual mother does not know that, and the majority of physicians do not know it; in the first place we do not know anything about the milk the child is getting, we haven't analyzed it. Of course the proper food is mother's milk, but we see we cannot get it in a majority of cases.

With regard to distributing stations, we know what is being done in Chicago, and we know what is done in New York through the Nathan Strauss laboratories, fourteen to twenty situated in different regions over the city, furnishing for the nominal sum of about five cents the amount of food necessary for a child through the day; so we can get a makeshift of pure milk, we can get properly modified milk at a price far less than we have to pay the Walker-Gordon people.

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C. H. JOHNSTON, Grand Rapids: Six years ago the City of Rochester, N. Y., instituted a thorough system of milk inspection, including both chemical and biological examinations. Bacteriological counts of about 500 samples of milk have been made in each of the past 3 years, during which time there has been a decrease of 33% in the number of bacteria.

During the same time the Common Council of the city has granted the Health Officer \$900.00 per year for the purpose of improving the milk supply. A central station or milk laboratory was established on a farm four miles from the city and placed in charge of a trained nurse. The cans and all utensils coming in contact with the milk are steam sterilized. The nurse or her assistant goes to the stable at milking time, and after seeing that the cow's udder is carefully cleansed and the milker's hands washed, she removes the milk pail from the sterile bag in which it is carried and hands it to the milker. As soon as removed from beneath the cow the pail is covered with a double layer of sterilized cheese cloth, which is held in place with a wide rubber band, and taken to the laboratory. The milk is then properly diluted, and poured into sterilized bottles, which are corked and plunged into tubs of ice water. The bottles are then placed in racks, covered with ice, and shipped to the milk stations, one in each of the four quarters of the city. Each station is in charge of a trained nurse,

whose duty it is, in the absence of advice from a physician, to weigh the babies applying for milk, prescribe food according to weight, and advise the more ignorant mothers about air, food, clothing, sleep and rest for their infants during warm weather.

The results in the lessened mortality of infants during the past six years have been most marked. From 1891 to 1896 there were 982 deaths in the city in children under 1 year of age during the months of July and August; and 236 deaths for the same period in children from 1 to 5 years of age. In the years 1897 to 1902 inclusive there were but 519 deaths in children under 1 year of age during the months of July and August, and but 167 between the ages of 1 and 5—a diminution of 47 per cent. in the death rate of children under 1 year of age, and of about 30 per cent. in children from 1 to 5 years old.

Is not this pretty positive evidence of the benefit derived by a municipality from a thorough system of milk inspection, and from a system of milk stations in charge of trained nurses such as have been established by the City of Rochester?

No one claims that cow's milk or any modification of it is a perfect substitute for mother's milk, and it is a great misfortune for a baby to be deprived of it. No one should ever put a baby upon modified milk or any other artificial food without good reasons. Conditions, however, frequently arise where it is inadvisable or impossible for a mother to nurse her infant and in such cases *some modification of fresh cows' milk* is the only reliable substitute. And while there is, of course, nothing new in the *whole milk* put out by the Walker-Gordon laboratories, a *new era* in infant feeding was begun in 1891 when the Walker-Gordon Co. opened its first laboratory in Boston, which was also the first laboratory to be established in the world for the scientific modification of cow's milk for infant feeding.

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A. M. CAMPBELL, Grand Rapids: I have very little to say about this subject. I cannot disagree with what the gentlemen have said in their discussion. Dr. Vaughan spoke about mother's milk, stating that there was no milk like mother's milk. Now, he knows and we all know that in very many instances the mother cannot nurse her own child; she might nurse somebody else's child successfully but not her own. We who are advocating the use of modified milk, are not advising our mothers to have their children live the breasts and take modified milk; but when they come to us with anemic and murasmatic children, who cannot get good mother's milk, it is our duty to give them the benefit of what we consider the most scientific and accurate plan of feeding such children.

Dr. Jennings' remarks as to the wonderful effect that the laboratories have had in awakening the profession to the necessity of using pure milk was timely. We must educate mothers to use pure milk, and I think the Walker-Gordon methods have been a great education to the profession.

# The Journal of the Michigan State Medical Society

All exchanges, books for review, manuscript, all communications relative to advertising, subscriptions, etc., should be addressed to the EDITOR, 57 W. Fort St., Detroit, Mich.

DETROIT, JULY, 1903

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6th " —MASON W. GRAY, Pontiac, Broncho-Pneumonias of Childhood.	
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11th " —GEO. F. BUTLER, Alma, General Medicine.	
12th " —F. MCD. HARKIN, Marquette.	

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## Editorial

### THE DETROIT MEETING.

The annual meeting of the State Society at Detroit, June 11th and 12th, was undoubtedly the most successful in the history of the Society, and, being the first since the reorganization, one of the most important. During the eleven months since the last annual meeting at Port Huron the state has been thoroughly organized; the fifty-eight chartered County Societies, representing seventy-eight of the eighty-three counties with a membership at this writing of 1750, being the result of the year's work of the Council and Officers of the State and County Societies.

The Council, presided over by the chairman, Dr. Leartus Connor, of Detroit, met the afternoon of the day preceding the meeting and carefully considered the large amount of work done during the year, and outlined its report to the House of Delegates. The Council had been composed of members appointed at the last annual meeting to serve until their successors could be elected by the House of Delegates, which was to meet for the first time this year. The House fully appreciated the work done by the members and returned to the Council eight of the former members for a period varying from 2 to 6 years. Two of the Councilors had requested not to serve longer. The new Council met on the last day, elected the officers of the old Council and outlined the work for the new year.

The House of Delegates met the evening preceding the meeting with almost

every delegate present; fifty-three of the sixty-five delegates registered at the meeting. It received the report of the Council and of the various committees; to expedite matters it appointed a business committee, to which all new business was referred without debate, a committee on finance and a nominating committee. Two other meetings of the House were held and its business was promptly transacted under the new constitution and by-laws, but one minor change having been made in the latter.

The first general meeting of the Society was held the morning of the first day. At this the address of the President was presented, in which he thoroughly discussed the work of the organization of the medical profession of Michigan and emphasized most emphatically that the work of the future lies in the County Society. The only name placed in nomination for the office of President was that of Dr. Wm. F. Breakey, of Ann Arbor, an honored member of the Society for 27 years.

At the meeting of the three sections papers of importance were presented and discussed. The general meeting and the sections were well attended. Five hundred and fifty-five members registered, which attendance more than doubles the attendance at any other meeting in the history of the Society. All the meetings were held in a large, commodious building; everything worked harmoniously; business was promptly dispatched; and there was not a discordant note.

Grand Rapids was chosen as the place of meeting for 1904, and the House of Delegates wisely extended the duration of the session to three days.

## THE NOTTINGHAM MEDICAL ACT.\*

The Medical Registration Board's amendments to the Chandler Medical Act introduced in the House by Representative Nottingham, M.D., and which were passed by both branches of the Legislature without material change or alteration, and signed by the Governor on June fourth, create one of the most efficient medical acts in the United States. As is usual with acts in some of the better states, such as Ohio and New York, it demands the State Examination Test as a sole qualification for license, and an applicant before applying for such qualification must be in possession of a standard of preliminary education of a grade not less than that represented by a diploma from a recognized and listed high school, academy, college or university, and is also required to be a graduate of a standard and approved medical college with a course of not less than four years of seven months in each year. The board is given authority to raise the standard of both preliminary and medical education and to recognize or to refuse recognition to high schools, academies, colleges and universities which, in the judgment of the board, fulfil or do not fulfil the requirements of standard and reputability as set by the board, but it cannot recognize a lower standard than that set by law. Of course this provision of the act gives the Medical Registration Board almost arbitrary power as regards standards, but in order to raise the standard of medical

qualifications in this state and to maintain it, this power is absolutely necessary. Under this provision for increased standard Michigan will be able to enter into reciprocity relations with all of the better states of the Union. Already she has unlimited reciprocity with Wisconsin and Indiana, and in a short time will have similar relations with Ohio, Iowa and Kansas. She has partial reciprocity with Illinois, New Jersey and Maine and negotiations leading to reciprocity with several other states. Michigan has been called the "mother of practical medical reciprocity" from the fact that she took the first steps which resulted in the formation of the American Confederation of Reciprocating, Examining and Licensing Medical Boards, and through this Confederation a basis for the reciprocal exchange of state certificates has been created whereby medical reciprocity between several first-class states has become a reality, not a theory as in the past.

The discipline clause, which has been added to the medical act, will undoubtedly do something towards purifying the medical atmosphere of this state. From certain quarters we hear that the board has been granted far too arbitrary powers in enforcing the penalties provided for professional immorality, but it is necessary that the board should have absolute power to administer properly and fearlessly a clause of this nature. The Chandler Medical Act has withstood attacks upon it not only in the State Supreme Court, but in the United States Supreme Court. The amendments are built upon the same sure legal foundation and likewise will withstand similar attacks.

\*To be found on page 328 of this issue.

B. D. HARISON.

## DO IT NOW.

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TO GATHER STATISTICS REGARDING THE  
PREVALENCE OF VENEREAL DISEASES  
IN MICHIGAN.

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At the last meeting of the Michigan State Medical Society a committee was appointed to gather from the members data regarding the prevalence of venereal diseases. Statistics to be of value must approach accuracy, and to secure this it is incumbent upon every member of the Society to aid the committee in every way possible. Familiarity with danger breeds contempt, and because of the frequency of venereal diseases, coupled with the fact that they seldom prevent the following of the ordinary vocations, and primarily are seldom the cause of death, they have come to be regarded by the laity of little moment, and to a certain extent this feeling pervades the medical profession. If these diseases and their sequelae affected only those who acquired them by acts of venery, an apathy regarding their existence might be pardoned on the ground that the sufferer was being punished for wrong doing, but when we consider the large number who are the innocent victims of disease, the importance of inaugurating measures to control the spread of the diseases will be apparent to every one. To a large extent the frequency of these diseases is due to a lack of education on the part of the laity, and also to a laxity of health laws, and it becomes us as educators, as well as physicians, to be prepared with facts upon which arguments may be based in our efforts to control venereal diseases.

There are 1,800 members of our Society, and it will be impossible to reach them all personally, but it will take but a few moments of the time of each to report to the committee the number of cases, and the disease, or its sequela, which he is treating say on July 1st, 1903. Will you do it?

In the next issue of the Journal will be found a blank for keeping record of these diseases in a uniform manner for statistics during the year.

ALBERT E. CARRIER.

The committee is at work formulating plans for future data and will probably have something to offer in the next issue of the Journal.

The committee is composed of Albert E. Carrier, M. D., Chairman, Detroit; R. H. Spencer, M. D., Grand Rapids; J. F. Breakey, M. D., Ann Arbor.

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## County Society News.

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### HILSDALE COUNTY.

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Program of the quarterly meeting of Hillsdale County Medical Society, Friday, May 15, 1903, at Hillsdale, Michigan:

Call to order by President.

Reading of minutes of preceding meeting.

Admission of new members.

"Retroversion of the Uterus," Dr. Arthur G. Doty, Frontier. Followed by Dr. R. W. McLain, Allen; Dr. A. Striemer, Ransom.

"The Value of Drugs in Acute Diseases," Dr. Walter H. Sawyer, Hillsdale. Followed by Dr. W. H. Atterbury, Litchfield; Dr. W. H. Ditmars, Jonesville.

"Some Points in Diagnosis," Dr. W. R. Ditmars, North Adams. Followed by general discussion.

"Pneumonia," Dr. Charles Barnaby, Somerset Center. Discussion: Dr. Bower, Camden; Dr. Hughes, Cambria.

"Haughey's Ideal Suture," Dr. W. H. Haughey, Battle Creek.

Address: "Phases of Appendicitis," Dr. Hal C. Wyman, Detroit.

H. H. FRAZIER, Secretary.

## IONIA COUNTY.

THE CONSERVATIVE ELEMENT IN THE  
TREATMENT OF APPENDICITIS,  
FROM A SURGEON'S  
STANDPOINT.\*

SCHUYLER C. GRAVES,  
Grand Rapids.

The great question, as to the treatment of appendicitis, has not been settled. It is still *sub judice* and it will remain so until a riper—a more extended—experience has cleared away the doubts at present existing in the minds of many conscientious men, and has decided once for all the verities in the case.

It is deplorable that such disagreement should obtain in a matter so fraught with the element of life and death—a matter bearing so directly upon the weal or woe of our fellows, but we must plod patiently on, acting as our experience and our conscience dictate, until all can see alike. Possibly this day may never dawn. Possibly the personal equation on the bed and at its side, physical resistance, above or below par, on the one hand, and individual skill greater or less, on the other, may prevent any unity of action among medical men. Personally I feel that the upshot of the whole matter will prove to be something of this sort. In the event of such an issue a surgeon may operate or not upon any given case; but as appendicitis is a purely surgical malady it will be the duty of any physician to at least keep in touch with an experienced surgeon during the handling of appendiceal cases.

From the foregoing it will be seen that, for the present and possibly for the future as well, your orator takes a stand against any extreme view in the treatment of appendicitis.

Each operator, according to his experience, is an authority, and he would be quite the opposite of independent who, in the matter of treatment, would espouse a line of procedure diametrically opposed to the lessons learned from his own work, provided, of course, that the knowledge thus acquired had resulted in the placing of recovery above death in his percentage tables.

This paper is not a treatise on the subject of appendicitis; but bears chiefly upon that portion of the subject which carries with it to-day doubt and disagreement viz.: the treatment.

\*Read before the Ionia County Medical Society, at Belding, May 14th, 1903.

The etiological factors—diminished resistance, intemperance in diet, constipation, fecal (or other) concretions, occlusion, as subsidiary; and, over and around all, the microbes—the Streptococcus Pyogenes, the Staphylococcus Pyogenes Aureus or Albus, the Bacillus Coli Communis, as primary factors, I leave with this bare mention.

The varieties are more important as they have direct bearing upon the treatment.

As my own classification, I would name, 1st, Appendicular colic, due to angulation (a variety, by the way, more fanciful than real in many instances); 2nd, Inflammatory, non-suppurative, terminating in resolution. I believe these cases occur, despite the skeptics. 3rd, Inflammatory, infected, suppurative, non-occlusive, with discharge of pus into lumen of cecum; 4th, Inflammatory, infected, suppurative, occlusive (one or more occlusions), with eventual perforation into the circum-appendical region; (5th), The last named when nature, by the kindly act of a beneficent type of peritonitis (plastic), builds a local enteros-omental buttress about the pus, before or after rupture; 6th, The 4th when plastic peritonitis fails and the virulent pus escapes into an unprotected abdominal cavity. Cases of rupture of the secondary abscess, as noted in variety 5, are, practically, the same as those represented in No. 6, the general peritonitis being developed after one more stage, viz.—an unsuccessful attempt by nature to stem the tide.

The terms "recurrent" and "obliterant" appendicitis, and the multiple-abscess type, are self-explanatory and involve, to a greater or lesser extent, the preceding varieties.

The symptoms you all know. Sudden pain, general at first, then local; initial nausea or vomiting; pinched facial expression; tenderness upon pressure at site of appendix; local muscular rigidity; temperature, anything; pulse, anywhere. The pain, the tenderness upon pressure, and the local muscular rigidity form the great and reliable trinity in the symptomatology. The other indications may be absent; these, never.

What is the natural history of these various types of the disease?

The appendicular colic is simply painful; but I freely grant that this diagnosis can very seldom, if ever, be accurately made, and I am only speaking now in the abstract. The inflammatory, non-suppurative type resembles the colic, in its bearing upon life, though with a greater chance of subsequent infection and seriousness. The inflammatory, infected, suppurative, non-occlusive form, with discharge of pus into lumen of caecum,

has but little bearing upon the life of its possessor. The inflammatory, infected, suppurative, occlusive is often seen; an appendix, still unruptured, but filled with streptococcic or other culture, being removed from a free peritoneal cavity. It is needless to add that in such cases life trembles in the balance. The latter variety when perforation has led the pus into a protected space, the result of lymph exudate, is a very safe type of appendicitis. This is the so-termed circumscribed-abscess form of the disease.

In my experience these cases have seldom died when left to the course of nature. Fluids, under pressure, move along the lines of least resistance. These lines, sometimes, are very strange ones. The road may be toward and into the bladder, or beneath Poupart's ligament, or into a bowel, or into and beneath the lumbar muscles; but according to my observation the route most generally chosen is that into a bowel. When this occurs the temperature drops to normal, the pulse to normal (provided either or both have been elevated), pain disappears, the "lump" vanishes, and pus, sooner or later, appears at stool. Occasionally the line leads between bowel-coils and general peritonitis ensues.

The type rupturing primarily into the free peritoneal cavity, leads, as we all know only too well, to general septic peritonitis. This latter term, in my experience, spells the word "death." I have tried the plan of free irrigation and drainage in treating these cases. I have tried the McCosh plan of injecting a solution of salts into the bowel-lumen as an additional feature. I have tried the plan of George Ryerson Fowler, of elevating the head of the bed in order to deviate the absorption-currents from the diaphragmatic to the pelvic regions, plus drainage. I have tried Murphy's late plan of simple appendectomy, without irrigation, but with drainage. I have tried orrhoterapy in the shape of Marmorek's serum. I have tried gastric lavage and enteric flushing, and opium, and salines; but the term "general septic peritonitis" has, to me, with but one exception, spelled the word "death."

It would seem that the search of surgical scientists should be directed toward the elimination of this veritable scourge from the domain of surgery, and this, indeed, we all seek—only by different routes.

It is the conviction of all, I believe, that there is, at present, no way by which appendicitis can be treated with 100% of recoveries. We must then espouse that plan which is associated with the least mortality.

It is said by those who recommend operation in every case that if surgical interference could be had within the first twenty-four hours, the mortality would be practically nil. I think so, too; but the difficulty with this suggestion lies in the impossibility of detecting the real incipiency of the disease.

I have felt certain that I was operating within the twenty-four hour limit only to find that what I took to be the initial pang of appendicitis was, as a matter of fact, the pain of a perforation. Death following the knife, in such a case, when the pulse, ante operationem, was 110 and post operationem, 140, 150, 160, etc. with the inevitable collapse, makes one feel as though he had deprived a fellow of a chance to recover through the development of a local abscess with its subsequent natural or artificial termination.

There was a time when I was an extremist. I used to argue thus,—"Let us *trust* this disease less and *recognize* its nature *more*, by opening the door and looking in." I did this for some time as a routine practice, but I found that opening the door to a better acquaintance with the disease opened the door of eternity to the patient, in too many instances. I soon felt that I could be satisfied with a less accurate knowledge of the workings of the disease if by interfering less I could see more of my patients restored to health and happiness. Thus my plan of action was changed to practically the opposite, and I saw with great gratification that funerals were less in evidence after my visitations. I found that with less operating in the acute, unprotected cases I could save more lives. I found that absolute rest, local refrigeration, and gastric emptiness produced excellent results. Cases resolved, or developed abscesses which were successfully attacked operatively. Some time after this, a year or so, the very interesting and, to my mind, very important paper of A. J. Ochsner came out. His ideas coincided with what my experience had taught me, with the exception, of course, of the gastric lavage in case of persistent vomiting.

Thus we see the two schools fairly portrayed. Their differences are only in regard to the treatment of the acute stage of the unprotected cases. We are all agreed that acute, circumscribed abscesses should be attacked operatively, and we all know that the time, par excellence, for successful operating is during an interval; which, by the way, is the antipode of the period synchronous with the development of septic peritonitis.

Each operator must be his own judge in this matter, and if he feels that he is in the right, let him go ahead and may God speed him; but I must

raise my voice against indiscriminate operating upon any and all cases of appendicitis, at any and all times, and by any and all types of operators, real or fanciful.

The best results, in my opinion, can be secured by a strict adherence to the simple plan as enunciated by Ochsner in the acute, unprotected cases, by operation in cases of circumscribed abscess, and by operation, especially in recurrent cases, during an interval following an acute attack.

Finally, the less you have to do, operatively, with general septic peritonitis, the more credit will redound to the art and the more confidence will be felt in the words and work of the artist.

#### LAPEER COUNTY.

The regular meeting of Lapeer County Medical Society will be held at North Branch, Wednesday, July 8, 1903. Program:

1. "Medical Treatment of Internal Hemorrhage," Dr. C. A. Wisner, Columbiaville.
2. "Pneumonitis," Dr. W. J. Taylor, Burnside.
3. "Strychnine Poisoning," Dr. G. W. Jones, Imlay City.
4. "Diphtheria and Treatment," Dr. O. J. Thomas, North Branch.

H. E. RANDALL,  
Secretary.

#### MONTCALM COUNTY.

The following is the program of the Montcalm County Medical Society, for the meeting to be held at Stanton, Michigan, Wednesday, July 1:

Call to order by the President and reading of minutes of last meeting.

Exhibition of patients.

Communications.

Report of delegate to State Medical Society.

Paper: "Cystitis," Dr. S. M. Gleason. Discussion led by Dr. A. P. Culbertson.

Paper: "Hystero-Epilepsy," Dr. W. P. Gamber. Discussion led by Dr. Josiah Black.

Paper: "Some Great Advances in Surgery," Dr. F. R. Blanchard. Discussion led by Dr. John Avery.

"Is Foetal Deformity Dependent on Maternal Impressions?" Dr. James Purden. Discussion led by Dr. A. L. Corey.

Paper: "Cholera Infantum," Dr. A. E. Savage. Discussion led by Dr. D. K. Black.

Paper: "Diphtheria," Dr. S. S. Ludlum. Discussion led by Dr. N. E. Bachman.

H. L. BOWER, Secretary

#### CHRONIC INTERSTITIAL NEPHRITIS\*

GEO. F. BUTLER,  
Alma.

Our knowledge of the nephrites has made considerable advances during the past few years, and the histologic studies of the kidney have enabled us to recognize in their minutest details the disorders which inflammatory conditions inflict upon the renal gland.

The history of the kidney diseases since the labors of Bright in 1831, to our day, shows the incessant progress which has been made in this part of pathology. If the therapeutics of these affections still leaves something to be desired, it must be recognized nevertheless that pathologic anatomy and clinical observations have given us new light on the state of the kidney, and on the influence which this state may have in the development of symptoms obscure and badly defined, and which it was impossible for us heretofore to assign to their proper place in our classifications.

This progress in the anatomo-physiologic study of renal lesions has demonstrated this first point, that affections of the kidney may be accompanied with albuminuria without, for that reason, having an inflammatory origin, and, while some of these affections depend on a congestive or phlegmasic process, others are degenerations, more or less complete, of the kidney, which may go on without the participation of any hyperemia.

In this paper, I shall confine my remarks principally to the discussion of that form of nephritis which belongs to the great group of scleroses, known as interstitial nephritis. It is unnecessary to enter fully into the pathology of contracted kidney. I wish, however, to remind you of two important factors, viz.: The glomeruli, the essential part of the renal gland, are scarcely recognizable, and the divisions of the renal arteries which furnish the vessels constituting the glomeruli, have undergone alteration.

This alteration in the vessels is not limited to the kidney, and here is a point to which I desire to call your attention. In fact, a careful examination of the arteries of persons suffering from renal cirrhosis shows that they are degenerated, from the heart to the capillary divisions. The lesions of the heart it will be unnecessary to discuss.

\*Read before the Montcalm County Medical Society, April 9, 1903.

Several theories have been proposed to explain the vascular lesions which accompany interstitial nephritis. These may be summed up as follows: 1st, The renal affection is consecutive to the cardiac affection (Rayer); 2nd, The renal lesion is primary. With regard to the latter hypothesis, we have the three following explanations:

(a) The hypertrophy of the heart is the consequence of the mechanical impediment to the circulation in the sclerosed kidneys (Traube).

(b) It is the consequence of the increase of general arterial tension, due to spasm of the small blood vessels, resulting from the presence in the blood of materials destined to be eliminated by the kidneys.

(c) It is due to generalized lesions of the small blood vessels of the organism; this alteration constitutes the *arterio-capillary fibrosis* of Gull and Sutton.

Richard Toma maintains that in the actual state of science, we are unable to determine whether the lesions of the blood vessels are primary or consecutive.

As for the arterial system itself, it is unquestionably diseased, and the vessels of the lungs and especially those of the brain, are also degenerated. Lancereaux and Peter attach great importance to this intimate correlation, which we have all had occasion to note, existing between cirrhosis of the kidney and a profound alteration of the entire circulatory system.

Personally, I believe with Peter, that it is because there is a general endarteritis that the left ventricle hypertrophies, by reason of its efforts to overcome the obstacle which the lesion opposes to the arterial circulation. It is because there is general endarteritis that there is renal endarteritis, and because there is renal endarteritis there is interstitial nephritis.

There are marked differences of opinion regarding this, however. Henry Morris thinks secondary renal sclerosis is rare, while Osler believes that arterio-sclerosis is much more frequently the cause of chronic nephritis than is generally supposed.

The question naturally arises, what is the cause of this vascular and renal degeneration?

Some of the predisposing or exciting causes that have been mentioned, are climate, gout and the lithemic diathesis, lead, valvular disease of the heart, grip, malarial fever, alcohol, as part of general fibrosis, syphilis, mental depression, hard mental work with insufficient exercise, chlorosis, various cachexias, and diseases involving certain excretory organs, as chronic skin diseases,

hepatic and intestinal affections, and auto-toxaemia. The latter cause I believe to be the most frequent and important, especially auto-toxaemia of digestive origin.

In view of the fact that the approach of primary interstitial nephritis is one of the most stealthy and insidious of all diseases, it is essential that the disease process be recognized at the earliest possible moment. The failure to make an early diagnosis is not always the physician's fault, for almost invariably the disease affects those who have been previously robust and healthy; usually high-livers and over-nourished individuals, and the malady may be well advanced before any noticeable symptoms prompt the patient to consult a physician. The cirrhotic process may have continued for five or ten years, with scarcely any perceptible manifestations, and it is often first discovered in a supposedly healthy individual when he applies for life insurance.

When a man past forty years of age, who is of full habit, of sedentary occupation, and who has for years led a strenuous business or professional life, consults a physician, the doctor should not forget the possibility of the presence of interstitial nephritis, and a most thorough and careful study of the case should be made. The diagnosis of the advanced disease can scarcely be overlooked by the most superficial observer, but a diagnosis of the early stages may tax the skill of the best of us. How may we early recognize the presence of the disease? It is frequently characterized by gastro-intestinal derangement, "fermentative dyspepsia" so-called, eructations of gas, abdominal discomfort, constipation, coated tongue, pain in the back at times oxaluria and excess of indican in the urine and other symptoms of auto-toxaemia, such as dryness, and pruritus or prurigo of the skin, purpura, eczema, headache, pallor, nosophobia, hypochondria, etc. The mind suffers with the body, which suffers most is often difficult to determine; not only is physical energy impaired but so is that of the mind and reason; the temper is vacillating, and the patient is moody, often irresolute, anxious, nervous and melancholic. He is easily fatigued, and both mental and physical fatigue increase auto-toxaemia in two ways: First, by the direct products of nerve waste, and second, by the fatigue of the organs of sanguification and elimination, from overwork after the loss of inhibitions, from central nerve tire.

The various products produced through normal work are eliminated by various channels. Some

are transformed in the alimentary canal into innocuous substances. Gases are eliminated by the lungs. Other compounds are intercepted and decomposed in the liver. Certain effete products are eliminated by the kidneys and skin. When any one of these emunctories is interfered with in discharge of its functions, the phenomena of auto-intoxication make their appearance, and the toxins gain access to the blood and are presented to the kidneys in excess, not only irritating and degenerating the kidneys, but the walls of the blood vessels as well.

Increased arterial tension follows, succeeded by evidence of arterio-sclerosis and atheroma.

A careful examination of the heart will disclose certain rhythmical disturbances. The second cardiac sound is *always* accentuated, sharper and louder than normal, and is best heard in the second right intercostal space, within an inch and a half of the sternum. In many cases—at least 80 per cent.—the normal area of cardiac dullness is more or less extended below and to the left, and when the disease is well advanced, this feature is prominent.

The early rhythmical disturbances are dependent on alteration of the cardiac muscle, the result of a primary fibrous degeneration of the left ventricle, a degeneration which is synchronous with the interstitial alterations taking place in the kidney. Potain thus describes the disturbance of the cardiac rhythm which supervenes in interstitial nephritis: "We distinguish three bruits, namely, the two normal sounds of the heart, and a morbid bruit superadded, which occurs immediately before the first sound, preceding it, however, by a brief pause, which is almost always shorter than the lesser pause. This bruit is much duller than the normal bruit. It is a shock, a perceptible heaving; it is hardly a real bruit. When the ear is applied to the chest, this bruit affects the tactile sensibility more, perhaps, than the auditory sense. The point where it is perceived the best, is a little above the apex and toward the right. But it may sometimes be distinguished throughout the whole extent of the precordial region. With this bruit the cardiac cycle is completed by three sounds of unequal length, and sometimes unequally distant, a rythm which the ear seizes with extreme facility, provided it has once learned to detect it."

The arterial tension is high; the pulse is invariably full and hard, never weak.

No symptoms occur as a rule, so long as the heart performs its work well. The patient's at-

tention is usually first attracted by epistaxis—disorders of vision, muscular cramps, and increased urination, and inquiry often reveals the fact that for months or years previously, excitement or exertion has caused breathlessness and palpitation of the heart.

As the disease progresses and there occurs failure of compensation, the cardio-vascular symptoms become more prominent. There may be present congestion and oedema of the lungs, obstinate attacks of bronchitis, and acute inflammation of the pleura, lungs, or peritoneum. Uraemic disorders now manifest themselves in some of the following forms: Diarrhoea, post-cervical neuralgia, sciatica, dyspnoea, drowsiness, coma, and sometimes convulsions.

With failure of compensation diagnosis is difficult. If the heart is primarily at fault, we have a congested kidney and hyaline casts only, in the urine. A therapeutic test of diagnostic value is digitalis, which will usually relieve the congestion and cause the albumen and casts to disappear from the urine.

When a person is suffering from interstitial nephritis he habitually rises at night frequently to pass urine, which to the eye appears normal in its transparency and nearly so in color. The urine is limpid, and when you examine its density you will find it always below 1020, and oscillates between 1005 and 1010. You may not find any, or scarcely any, traces of albumen, and it requires a good deal of experience to be able to detect a slight opalescence determined by heating. Various chemical tests, however, should be employed. Hyaline casts may be found if the sediment is concentrated. If you seek for tube casts you will not meet with any in the great majority of cases; if you determine the quantity of urea, as you ought always to do in such cases, you notice that the mass of urine contains but very little of it. The development of this disease is not at all typical. All the varying and manifold symptoms which I have described often manifest themselves with great intensity, and in order to be clearly diagnosticated, it calls for all the sagacity and experience of the physician, for these patients have little or no oedema usually, they have a great quantity of urine, and the urine may contain no trace even of albumen. How many cases of death unexplained have resulted from interstitial nephritis? How many diseases have deceived the physician as to their true nature, and have been dependent exclusively upon a renal cirrhosis? The number is greater than you would suppose, and such mistakes constantly

committed, result from this fact, that physicians have always been in the habit of referring for the diagnosis of chronic nephritis to Bright's description, and have an idea that it is necessary in order to be warranted in diagnosing this affection, to have general oedema and scanty urine which must be very albuminous. When these symptoms are not found, they seek elsewhere for the cause of the disease, and ascribe it by turns to other organs.

Such a mistake we ought never to commit, and whenever we notice severe disorders which a local condition cannot explain, we should examine the urine, and if we note a low density, if we detect troubles in the rhythm of the heart, we should be persuaded that it is to the kidneys that our investigations should be directed, and it is there that we should look if we would find the real origin of the symptoms which we observe. It is to be deplored that many physicians base their diagnosis on the urinary findings alone, whereas the diagnosis should be determined by the physical findings, and the chemical and microscopic examination of the urine is merely confirmatory evidence. The prevalence of the disease may be appreciated by a recent statement of Dr. C. L. Mix, who says that 3½ per cent. of the total deaths in Chicago during each of the past two years have been due to the various forms of chronic nephritis, and constitutes from two to four per cent. of the physicians' practice.

Regarding the prognosis of interstitial nephritis it is much more favorable than many oculists believe who give a two years' prognosis in cases of retinitis albuminuriae. The presence of these retinal changes does not afford any positive indication of the nature of the kidney disease, or of the stage which it has reached. These changes are found in every malady which is attended by albuminuria; not only in Bright's disease, but also, for example, in the albuminuria of pregnancy or of diphtheria, or in that consecutive to scarlatina. While there is no likelihood of a cure, I believe with care a patient's life may be prolonged for from five to fifteen years and even longer; many patients live fairly useful and undisturbed and reasonably comfortable lives for a long period.

Possibly too much time has been devoted to etiology and diagnosis, and I will now discuss the therapeutics, which is of equal moment; for as physicians we fail to grasp the true principle of our profession if we neglect that important branch of medicine, which, after all, as has been

well said, is "the keystone of the arch upon which all medical knowledge rests."

The therapeutic indications vary according to the period of the disease, and a certain medicament which at the onset might produce untoward results, can, on the contrary, be administered with advantage at a more advanced stage of the affection. There is not, in fact, any treatment for interstitial nephritis; there are successive treatments, and it is necessary that the physician, following step by step the progress of the disease, shall vary the choice of his remedies according to the circumstances supervening in the course of the affection. If certain medicines have at times been attended with success, and at others with failure, it is because physicians have not been careful rigorously to determine at what period of the disease the medicament should be employed, but have administered it tentatively or at haphazard.

The treatment is divided into dietetic, hygienic, hydrotherapeutic, and medicinal. It must be our endeavor to so modify the circumstances and habits of the patient as to lessen so far as possible the work of the kidneys. Nitrogenous food should be reduced, although it is perhaps unnecessary to abstain from such diet entirely, for we must remember that we have to guard against both uremia and anemia. Authors are by no means unanimous as to the best diet in this disease. All the *a priori* reasons which have been urged in favor of milk or any other particular diet, are fallacious, and the only way to attack the problem is to carefully observe the condition of the urine, not only as to the amount of albumen excreted, but as to its urea and other waste products as well, and also as to the condition of the patient upon different diets.

A series of observations conducted a few years ago when I was a member of the medical staff of Cook County Hospital, Chicago, revealed the following results:

1. Quantity of urine. The amount of urine secreted was greater upon a farinaceous or milk diet than upon a full diet.

2. Specific gravity. No special influence was noted, although it was a little lower on farinaceous and milk diets.

3. The quantity of albumen passed. There was, strange to say, less albumen passed upon a full diet, than upon farinaceous or milk diet.

4. The quantity of urea passed. This varied so that no reliable conclusions could be reached, sometimes less urea was passed upon a full diet than upon farinaceous or milk diet, and vice

versa. Often also there was less urea passed upon a farinaceous diet than upon a diet of milk.

5. General condition of patient. Contrary to the observations and opinions of many noted clinicians, I found the majority of patients did better upon a fairly full diet, as they were less liable to uremic symptoms. While upon this diet, however, free elimination was maintained.

For the average patient, therefore, I would recommend about the following method of feeding:

The patient should have three meals daily, at intervals of four or five hours, and no solid food should be taken between meals. The most important meal should be in the middle of the day, when he may have a little meat with short fiber, such as mutton, chicken, game, etc. In the morning or evening, he may be allowed some fish. He may partake of vegetable food, particularly the farinaceous. Milk may be employed freely, without the patient dislikes it, when water, preferably some pleasant alkaline water, may be drank freely.

Alcoholic stimulants and tobacco should be prohibited, although if the patient has been addicted to the use of alcoholics, mild red wine may be allowed. Highly seasoned and smoked foods, and tea and coffee should not be indulged in.

If possible, these patients should be free from care and anxiety and limit the amount of mental and physical work, although a moderate amount of daily exercise should be taken, and they should dwell in a climate that is warm, dry and equable, equability being of more importance than warmth and dryness, since the invalid may keep within doors after sunset.

The healthy performance of the functions of the skin is an important point in the hygiene of Bright's disease. We all know the intimate relation which exists between the functions of the skin and those of the kidneys. Authorities have long been in the habit of prescribing free sudation in Bright's disease, whether by hot-air baths, by vapor baths, or by the employment of hydrotherapy. In the employment of any hydrotherapeutic measures we must avoid every cause of renal congestion, and in the applications of hot air and cold water by unskilled attendants, which are practiced in Turkish bath parlors, it often happens that there is an aggravation rather than an amelioration of the disease.

*Mineral waters* are often beneficial. They increase not only the watery constituents, but the excretion of the waste products of tissue

metabolism, which are washed out from the tissues and the blood itself. Both laxative and alkaline-chalybeate waters are valuable.

Drugs have their places in the treatment of interstitial nephritis, it is true, but, after all, the little, yet very essential things of eating, drinking and doing, influence the patient's comfort and gradually turn the scale of health in his favor.

A good prescription to keep a patient on is the following:

Iodide of Sodium, 15 to 30 grains.

Phosphate of Sodium, 30 to 45 grains.

Chloride of Sodium, 90 grains.

Water, 1 quart.

This can be taken freely as a drink. It is a good eliminant, besides the iodide is a vaso-dilator and of great value in progressive lessening of elasticity and contraction of the smaller arteries. Moreover, this combination modifies the state of albuminoid substances in the blood.

When compensation fails, digitalis may be necessary, but it should be combined with some vaso-dilator to overcome peripheral resistance. Such drugs are the nitrites—such as sodium nitrite, spirit of nitrous ether and nitroglycerine, as well as the iodides, and opium. The nitrites have only one objectionable feature; they are much more rapid in their action than digitalis, while their effect is more transitory. In bad cases, I am partial to opium. It acts with about the same rapidity as digitalis, strengthening the heart, rendering the pulse fuller and firmer, and dilating the arterioles. It is of additional value in many of these cases on account of its hypnotic, analgesic and antispasmodic action. In the doses employed, it does not seem to make any material difference in the elimination of waste products. From 2 to 4 minims of the deodorized tincture are usually sufficient. As a general cardiac tonic, strychnine is unsurpassed.

To combat the anasarca, and the multiple consecutive effusions, the dyspnea, convulsions and other uremic symptoms, we may have to resort to the successive and even simultaneous use of stimulants, diuretics, purgatives, and diaphoretics. There is little choice in the remedies to be used in these conditions, the up-to-date physician being perfectly familiar with the medicaments best suited to the various serious symptoms to be overcome.

At certain stages of the disease, especially if the patient is very anemic, Basham's mixture will be found to be of great value.

We should not forget that purgatives play a very important role in the treatment of chronic nephritis, and fulfill three great indications: First, in determining an irritation upon the intestinal mucous membrane, they produce a revulsion from the inflamed kidney; then in bringing about a hypersecretion from the glands of the intestines, they deplete the vascular system, and thus combat the anasarca and oedema which accompany the nephritis; lastly, and especially, they enable the solid and toxic matters of the urine in cases of uremia, to find a supplementary way of excretion. This last mode of action is in my estimation far the most important, and free purgation is especially beneficial in interstitial nephritis, and by the judicious use of purgatives, and free elimination, we may greatly prolong the lives of the victims of this disease.

Entertaining the views I do regarding the chief etiologic factor of this malady and the consequent pathologic condition, it is difficult for me to understand how splitting the capsule or even a stripping back of the capsule as far as the hilum, which has been recommended recently, would alter the pathologic process. I think it is but another case of "The Man Behind the Knife."

Recovery under any treatment is rare, but we should not forget that in such cases, to prolong the life of our patients, and render them comfortable is a result worth striving for. Remember that each case must be treated individually; that there is no dextrous legerdemain required, but a thorough understanding of the pathologic conditions, natural processes, and perfect familiarity with the therapeutic measures employed, are necessary to insure success.

#### ST. JOSEPH COUNTY.

A combined business and social meeting of the St. Joseph County Medical Society was held last month at Klingers Lake. After a pleasant day on the lake, the Society was called to order at Oakwood Tavern. Dr. Slate was elected the Representative in the House of Delegates of the State Society. Dr. Lang reported a number of interesting cases. The next meeting of the Society will be held on July 14th at Sturgis.

J. R. WILLIAMS, Sec'y.

#### TUSCOLA COUNTY.

The third regular meeting of the Tuscola County Medical Society will be held at the Pres-

byterian Church, Caro, Mich., Monday, July 13, 1903. Every physician in the county is cordially invited to attend this meeting, to take part in the discussion of the papers and to become a member of the society. Program:

1. Call to order by President, A. L. Seeley.
  2. Reading of minutes of previous meeting.
  3. Presentation of clinical cases.
  4. "Smallpox," J. E. Handy. Discussion opened by F. D. LeValley.
  5. "Empyema," report of cases, H. A. Bishop.
  6. "Cholelithiasis," D. P. Deming.
  7. "Chronic Urethritis in the Male," F. P. Bender.
  8. "Cancer of Liver," report of a case, autopsy, J. H. Hays.
  9. "A Post-Mortem Diagnosis," M. M. Wickware.
  10. "Cold in the Treatment of Rheumatism," A. L. Seeley.
  11. "Eclampsia," B. D'Arcy.
  12. Report of delegate to State Society, P. J. Livingston.
  13. Unfinished and miscellaneous business.
  14. Announcements.
- Adjournment.

A banquet will be served in the evening by the ladies of the Presbyterian church.

W. C. GARVIN,  
Secretary.

#### WAYNE COUNTY.

The following are abstracts of papers comprising a symposium on Anesthesia; the papers were read before a general session of the Wayne County Medical Society, April 16:

##### CHLOROFORM.

GILBERT J. ANDERSON,  
Detroit.

The action of the drug is reviewed. The following stage is the condition in which the patient should be kept for ordinary surgical anaesthesia: Muscular system relaxed, respiration quickened but shallow, pulse about normal, pupils rather contracted, reflex winking upon touching the conjunctiva slightly manifested. Pushing the anaesthetic beyond this point, stertorous breathing followed by failure of respiration, a weaker and more rapid heart action, dilatation of pupils, loss of reflexes, then finally failure of

respiration and pulse, collapse, and death, ensue.

Chloroform is well taken by children. Valvular lesion with good or fair compensation is not a contra-indication for administering chloroform. It is to be preferred in operations on the air passages, in atheromatous conditions, in kidney lesions, and in brain operations. Likewise it is the choice in labor.

Chloroform is administered in two ways—the high and low percentage vapor. With the high percentage vapor the anaesthetic is administered in large quantities and rapidly, while the reverse is the case with the low percentage, which is to be preferred.

The dangers of chloroform administration are usually circulatory and respiratory. Cardiac depression, if in gradual administration, is usually secondary to respiratory paralysis. It is primary in case a high percentage vapor has been given rapidly.

Death is likely to result from shock if the operation is commenced during light narcosis. Never proceed to the administration of chloroform without being prepared to meet emergencies as they arise.

#### ETHER AS A GENERAL ANAESTHETIC.

GEORGE E. FAY,  
Detroit.

A careful physical examination and analysis of the urine should be a routine preliminary practice. Ether should not be used in cases suffering from lung or bronchial affections, nor in very young or aged individuals. It is contra-indicated when great excitement is to be avoided, or where deep narcosis is desired. It is not as satisfactory as chloroform in patients addicted to alcohol. In fatty degeneration, especially of the heart or kidney, ether is preferable to chloroform.

The stomach and bowels should be empty at the time of commencing the anaesthesia. This is accomplished by fasting, purgatives and, as recommended by some, lavage. Lavage is also frequently practiced immediately following the operation. An antiseptic mouth-wash and gargle is a good prophylactic against ether pneumonia.

The head should be at the level of the body, body loosely clad and the covering warm. Notice should be taken that no foreign bodies are in the

mouth. The condition of the pulse is noted. A quarter of morphine and one-one-hundredth of atropine are indicated in some cases, as a preliminary measure.

The pulse during the first sub-conscious stage is rapid and full, and continues so during the stage of excitement. As anesthesia becomes deeper the pulse becomes regular. The pupils at first are dilated and respond to light. In the stage of deep anesthesia the pupils are contracted, but still respond to light. Dilatation of the pupils with failure to respond to light in this stage is a danger signal.

As complete anaesthesia is attained, the respirations become deep and regular, the muscles completely relaxed and all reflexes are found wanting, those caused by stimulation of the terminals of the trigeminals being the last to disappear. In testing the reflex the cornea should never be touched with the finger. Brushing the eyelashes will suffice.

The methods of administering the ether, of handling the patients, of resuscitation, and of the after-care of the patient are given.

#### NITROUS OXIDE.

SAMUEL STRAITH, D. D. S.,  
Detroit.

Anesthesia by nitrous oxide is becoming more popular. It is unfair to make a comparison between nitrous oxide, ether, or chloroform, as the latter two have been used in different conditions than the first. Statistics show a death in five or ten thousand when chloroform or ether has been used, but not a single death in hundreds of thousands with nitrous oxide. And more in favor of this is the fact that dentists, who administer the gas most frequently, have had no special education on aesthetics. A record of more than four hundred thousand shows not a death.

A single administration of gas will produce anesthesia lasting from twenty-five to fifty seconds, a sufficient time for innumerable operations. However, operations lasting from one to two hours have been performed under nitrous oxide anesthesia.

The author says that nitrous oxide should be employed, and with perfect safety, in all short operations, whereas now it is often the custom to administer chloroform or ether.

## LOCAL AND SPINAL ANALGESIA.

LOUIS J. HIRSCHMAN,  
Detroit.

The author speaks of the early stages of local analgesia and of the discovery of cocaine. This leads to the use of other analgesics, among which are carbolic acid in various strengths, ether sprays, ice packs, brine and other freezing agents, but which are of little value. Ethyl chloride is used somewhat generally for slight operations, but care must be taken not to freeze the water in the skin for too long a period. The production of local anemia, especially in the extremities, is often a valuable adjunct to chemically produced analgesia.

Schleich's method of infiltration with solution of salt, sterile water and cocaine, is very satisfactory.

Guaiacol, orthoform, tropococain, holocain, eucain B, and chlorethane have their advocates, but the best all around analgesic agent is eucain B. Its analgesic power is as great as that of cocaine; it is less poisonous and less irritating; may be sterilized by boiling; and its solution keeps longer. For general infiltration a solution of eucain B, 1, salt, 8, and water, 1000, is advised. For deep injections a 2% to 5% solution is recommended.

Cocaine, encaïn B and chlorethane solutions are used on mucous membranes.

In sub-arachnoid injections a one-half to one per cent. solution of sterilized eucain B, cocaine or chlorethane may be used.

The author makes a plea for the more general use of local anodyne and analgesic agents, when minor operations are to be performed, such as opening abscesses, felonies, buboes, etc.

WAYNE COUNTY MEDICAL SOCIETY  
PROGRAM FOR MAY.

## GENERAL MEETINGS.

*Clinical and Pathological Evening.*—Reports of cases and exhibition of specimens were made by Drs. N. T. Shaw, Max Ballin, J. N. Bell, W. F. Metcalf, Emil Amberg, and John Flintermann.

*Historical Night.*—This meeting was held in honor of the three Nestors of the Society—Drs. Geo. B. Russel, Morse Stewart and Herman Kiefer. Supper was served at 7 o'clock, followed by the regular meeting.

*Dr. H. A. Hare, Philadelphia.*—Remarks: (a) Upon Cardiac Disease Without Valvular Lesions; (b) The Treatment of Aortic Aneurism by Electrolysis; (c) The Influence of Alcohol in Infections.

Annual meeting, May 28.

## SECTIONS.

*Surgery*—Dr. E. B. Smith, "Pistol Shot Wounds of the Head."

*Dr. W. B. James, Eloise*, "Presentation of Brain with Bullets Embedded."

*Internal Medicine and Pathology*—Dr. William Appelbe, "Chlorosis."

*Obstetrics and Gynaecology*—"Ectopic Gestation." General discussion.

*Eye, Ear, Nose and Throat*—Dr. E. L. Shurly, "Studies and Fragments in Laryngological Science."

At the meeting of May 28 the following officers were elected for the ensuing year:

President—Dr. C. G. Jennings.

Vice-President—Dr. A. N. Collins.

Secretary-Treasurer—Dr. Guy L. Connor.

Board of Directors—Drs. S. G. Miner, A. D. Holmes, H. O. Walker, Samuel Bell, J. E. Clark.

The different sections elected officers as follows:

## Surgery:

President, Dr. Max Ballin.

Secretary, Dr. L. J. Hirschman.

## Obstetrics and Gynaecology:

President, Dr. Florence Huson.

Secretary, .....

## Eye, Ear, Nose and Throat:

President, Dr. E. L. Shurly.

Secretary, Dr. W. R. Parker.

Notice of an amendment to the Constitution to make the retiring President and Secretary-Treasurer members of the Board of Directors has been given. The idea is to utilize the knowledge gained by these two officers during their terms of service.

On May 14 the Society gave a supper in honor of its three Nestors—Drs. Geo. B. Russel, Morse Stewart and Herman Kiefer. The event was such a successful and happy affair that the idea has been suggested to make it a yearly function.

Great interest and enthusiasm have been manifested during the year in the Nottingham bill. This was especially marked when a rumor was circulated that the Governor would not sign the bill. A special meeting was largely attended and telegrams sent to every representative and to the senators of this district.

HUGH MULHERON, Secretary.

## Meeting Notes.

### THIRTY-EIGHTH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY, HELD AT DETROIT, MICHIGAN, JUNE 11TH AND 12TH, 1903.

### MINUTES OF THE PROCEEDINGS OF THE HOUSE OF DELEGATES.

PRELIMINARY MEETING, WEDNESDAY, JUNE 10TH,  
7:30 P. M.

1. Called to order by the President, A. E. Bulson, Jackson, after he had stated briefly the duties and responsibilities of the members of the House. Roll call showed a quorum present. Registration showed 53 of the 65 delegates in attendance upon the meetings as follows:

Allegan Co.—M. Chase, Otsego.  
Alpena Co.—D. A. Cameron, Alpena.  
Bay Co.—J. W. Hauxhurst, W. Bay City.  
Berrien Co.—W. L. Wilson, St. Joseph.  
Branch Co.—G. H. Clizbe, Coldwater, Alternate.  
Calhoun Co.—A. W. Alvord, Battle Creek.  
Cheboygan Co.—C. B. Tweedale, Cheboygan.  
Chippewa Co.—T. W. Kirby, Sault Ste. Marie, Alternate.  
Clinton Co.—J. E. Taylor, Ovid.  
Delta Co.—R. S. Forsyth, Gladstone.  
Dickinson-Iron Cos.—S. Edwin Cruse, Iron Mountain.  
Eaton Co.—J. B. Bradley, Eaton Rapids.  
Emmet Co.—J. J. Reycraft, Petoskey, Alternate.  
Genesee Co.—G. V. Chamberlain, Flint.  
Gratiot Co.—G. F. Butler, Alma.  
Hillsdale Co.—Bion Whelan, Hillsdale, Alternate.  
Houghton Co.—C. H. Rodi, Calumet.  
Huron Co.—D. J. McColl, Elkton.  
Ingham Co.—A. D. Hagadorn, Lansing.  
Ionia Co.—F. W. Braley, Saranac.  
Iosco Co.—Frederick C. Thompson, E. Tawas.  
Isabella Co.—James MacEntee, Mt. Pleasant.  
Jackson Co.—D. E. Robinson, Jackson.  
Kent Co.—J. A. McColl, D. E. Welsh, Grand Rapids.  
Lapeer Co.—H. McColl, Lapeer.

Livingston Co.—A. W. Cooper, Fowlerville.  
Macomb Co.—W. Greenshields, Romeo.  
Manistee Co.—J. A. King, Manistee.  
Marquette Co.—F. M. Harkin, Marquette.  
Mason Co.—W. H. Taylor, Ludington.  
Mecosta Co.—L. S. Griswold, Big Rapids.  
Midland Co.—A. D. Salsbury, Midland, Alternate.

Monroe Co.—P. S. Root, Monroe.  
Montcalm Co.—H. L. Bower, Greenville.  
Oakland Co.—M. W. Gray, Pontiac.  
Ottawa Co.—B. B. Godfrey, Holland.  
Sanilac Co.—H. W. Smith, Carsonville.  
Schoolcraft Co.—J. M. Sattler, Manistique.  
Shiawassee Co.—A. M. Hume, Owosso.  
St. Clair Co.—M. Willson, Port Huron.  
St. Joseph Co.—L. K. Slote, Constantine, Alternate.  
Tuscola Co.—P. J. Livingstone, Caro.  
Van Buren Co.—G. D. Carnes, South Haven.  
Washtenaw Co.—W. F. Breakey, Ann Arbor.  
Wayne Co.—A. D. Holmes, D. Inglis, W. F. Metcalf, G. W. Moran, E. L. Shurly, F. B. Tibbals, H. A. Wright, Detroit.  
Wexford Co.—C. E. Miller, Cadillac.  
2. Report of the Council. Leartus Connor, Detroit, Chairman. (See Journal, July, 1903, page 316). Accepted and adopted.

3. Report of the Michigan Representatives in the House of Delegates of the American Medical Association, H. O. Walker, Detroit, Senior Member. (See Journal of the American Medical Association). Accepted and placed on file.

4. Report of Committee on Legislation, B. D. Harison, Sault Ste. Marie, Chairman. (See Journal, July, 1903, page 323). Accepted and Dr. Harison given a vote of thanks for his good work.

5. Report of Auxiliary Committee of Committee on National Legislation. Emil Amberg, Detroit. (See Journal, July, 1903, page 326). Accepted and placed on file.

6. Report of Committee to petition the Legislature for an appropriation for the establishment of a properly equipped sanitarium for the treatment of the early stages of tuberculosis.

Dr. C. G. Jennings, Detroit, member of the committee, reported that five meetings were held; bill prepared and presented to Legislature; introduced into House by Representative Denby, of Wayne County, and referred to Committee on Public Health; never taken from latter committee. Recommended that the campaign for the passage of the bill be carried on through the various County Societies; asked that the committee be discharged and a new committee be appointed.

Report accepted; vote of thanks given to the committee and committee discharged.

7. Miscellaneous business:  
President appointed a Nominating Committee to nominate the four Vice-Presidents;

four Councilors for two years; four for four years; and four for six years; two Representatives in the House of Delegates, American Medical Association, for one year; two for two years; and to fix the place of meeting for 1904 (By-Laws, Chap. VI, Sec. 2): A. W. Alvord, Battle Creek; Hugh McColl, Lapeer; Geo. W. Moran, Detroit; L. S. Griswold, Big Rapids; W. L. Wilson, St. Joseph. Committee confirmed.

To expedite business, on motion of Dr. A. W. Alvord, Battle Creek, (duly carried), the President appointed a Business Committee, and a Committee on Finance, to which is referred the items of expense submitted by the Councilor of each district as incurred by him in the performance of his duties during the year, to be audited and acted upon. (By-Laws, Chap. VIII, Sec. 7).

Business Committee: J. B. Bradley, Eaton Rapids; J. A. King, Manistee; W. Greenshields, Romeo; A. M. Hume, Owosso; and P. S. Root, Monroe.

Committee on Finance: C. H. Rodi, Calumet; D. E. Robinson, Jackson; M. W. Gray, Pontiac; B. B. Godfrey, Holland; and D. E. Welsh, Grand Rapids.

Motion by Dr. A. W. Alvord, Battle Creek, that all questions, not matters of finances (by the By-Laws, Chap. VIII, Sec. 6, referred to the Council) be referred to the Business Committee without debate, amended by Dr. M. Chase, Otsego, that all new business be submitted in writing. Carried.

Motion by Dr. H. A. Wright, Detroit, that the County Society elect at the prescribed meeting an alternate delegate for each delegate elected. Referred to Business Committee.

Motion by a member that the House endorse the Proposed Special Congressional Charter for the American Medical Association. Referred to Business Committee.

Adjourned until 8:30 a. m., June 11th.

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First Day, Thursday, June 11th, 8:30 a. m.

Reading of minutes of previous meeting accepted.

Unfinished Business:

Report of Business Committee, J. B. Bradley, Eaton Rapids, Chairman:

Recommended that the County Society elect an alternate delegate for each delegate elected. Carried.

Recommended the endorsement of the plan submitted for the proposed special Congressional Charter for the American Medical Association. Carried.

Miscellaneous Business:

Resolution offered by Dr. F. B. Tibbals, Detroit:

WHEREAS, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures; therefore, be it

*Resolved*, That it is the sense of the Michigan State Medical Society that measures be taken by boards of health, boards of education and school authorities, and, where possible, legislation be secured, looking to the examination of the eyes and ears of all school children, that disease in its incipiency may be discovered and corrected.

(At the last meeting of the American Medical Association, held in New Orleans, May, 1903, the Section on Eye Diseases, and the American Medical Association as a whole, adopted the above resolution.)

Referred to Business Committee.

Resolution offered by Dr. D. E. Robinson, Jackson:

To amend By-Laws, Chap. VI, Sec. 2, which reads: "The President shall annually appoint a Nominating Committee of five from the House of Delegates, no two of whom shall be from the same Councilor District"—by striking out the word "President" and substituting the word "House of Delegates;" by striking out the words "annually appoint" and substituting the words "elect annually at its first meeting."

The section shall then read: "The House of Delegates shall elect annually at its first meeting a Nominating Committee of five from the House of Delegates, no two of whom shall be from the same Councilor District."

Referred to Business Committee.

Report of Committee on Finance, C. H. Rodi, Calumet, Chairman.

Committee found the accounts submitted by the Councilors correct, and recommended that the Secretary be instructed to draw upon the Treasurer for the amounts submitted, not to exceed \$25 for each Councilor, as provided by the By-Laws (Chap. VIII, Sec. 7).

Adopted and accepted.

Resolution offered by Dr. F. B. Tibbals, Detroit:

"We commend most heartily the clause in the

"Nottingham Medical Act" prohibiting the publication or circulation of obscene advertising matter, and urge upon the State Board of Registration in Medicine the strict enforcement of the extreme penalty allowed against all offenders."

Referred to Business Committee.

Report of the Business Committee, J. B. Bradley, Eaton Rapids, Chairman:

Recommended resolution offered by Dr. F. B. Tibbals in reference to the examination of the eyes of school children; recommended favorable action on amendment to the By-Laws offered by Dr. D. E. Robinson (which latter must lie upon the table for one day, By-Laws, Chap. XIV); and referred the resolution of Dr. F. B. Tibbals on the endorsement of a certain clause in the Nottingham Medical Act to the House without recommendation, as it was deemed to be of sufficient interest and importance to be considered and acted upon by the House as a Committee of the Whole.

Accepted and adopted.

It was then moved that the House adopt the resolutions offered by Dr. F. B. Tibbals. Carried unanimously.

Adjourned to June 12th, 12 o'clock m.

SECOND DAY, FRIDAY, JUNE 12TH, 12 O'CLOCK M.

Reading of minutes of previous meeting accepted.

Report of Nominating Committee: A. W. Alvord, Battle Creek, Chairman:

Committee nominated for:

1st Vice-President—Geo. C. Hafford, Albion.  
2nd Vice-President—Jas. A. King, Manistee.  
3rd Vice-President—J. B. Bradley, Eaton  
Rapids.

\*4th Vice-President—

For Councilors:

Leartus Connor, Detroit, term to expire....1909  
W. H. Haughey, Battle Creek, term to expire....1909  
C. B. Burr, Flint, term to expire.....1909  
W. T. Dodge, Big Rapids, term to expire....1909  
A. E. Bulson, Jackson, term to expire.....1907  
S. I. Small, Saginaw, term to expire.....1907  
B. H. McMullen, Cadillac, term to expire....1907  
T. A. Felch, Ishpeming, term to expire.....1907  
Geo. D. Carnes, South Haven, term to expire 1905  
D. Emmet Welsh, Grand Rapids, term to  
expire .....1905  
M. Willson, Port Huron, term to expire....1905

\*Name here given incorrect—no such member of the Society—place to be filled by the President. W. E. Chapman, Cheboygan, appointed.

H. B. Landon, Bay City, term to expire....1905  
Representatives in the House of Delegates,  
American Medical Association:

H. O. Walker, Detroit, term to expire.....1905  
V. C. Vaughan, Ann Arbor, term to expire..1905  
W. K. West, Houghton, term to expire.....1904  
C. B. Stockwell, Port Huron, term to expire.1904

Place of meeting for 1904, Grand Rapids.

Names to be submitted to the Secretary of State from which the Governor may choose five as members of the Michigan State Board of Registration in Medicine in accordance with the provisions of the Nottingham Medical Act (See Journal, July, 1903, page 328; Iso section 1 of act):

J. B. Griswold, Grand Rapids.  
Geo. E. Ranney, Lansing.  
H. B. Osborne, Kalamazoo.  
H. McColl, Lapeer.  
W. H. Sawyer, Hillsdale.  
D. K. Black, Greenville.  
W. L. Wilson, St. Joseph.  
C. S. Cope, Ionia.  
P. S. Root, Monroe.  
L. D. Knowles, Three Rivers.  
G. W. Moran, Detroit.  
L. S. Griswold, Big Rapids.  
Jas. B. Martin, Traverse City.  
F. A. Towsley, Midland.  
A. D. Holmes, Detroit.

As it appeared that Dr. J. A. King, Manistee, and Dr. J. B. Bradley, Eaton Rapids, nominated for the offices of Second and Third Vice-Presidents respectively, are members of the House and therefore ineligible to hold the said office (Constitution, Art. VIII, Sec. 3), it was moved that the report be referred back to the Nominating Committee and that the committee nominate two other names to represent the districts in question.

Motion supported and carried.

On motion of Dr. E. L. Shurly, Detroit, (duly seconded) report, with the exception of the two names mentioned, was accepted and adopted.

On motion of Dr. A. W. Hume, Owosso, (carried) the House of Delegates resolved itself into a Committee of the Whole for the purpose of making its own nominations. (By-Laws, Chap. VI, Sec. 5.)

On motion of Dr. L. S. Griswold, Big Rapids, supported by Dr. H. L. Bower, Greenville, *Dr. Chas. S. Cope, of Ionia*, was nominated for the office of *Third Vice-President*. Carried.

On motion of Dr. J. A. King, Manistee, supported by Dr. E. L. Shurly, Detroit, Dr. W. S. Walkley, *Grand Haven*, was nominated for the office of *Second Vice-President*. Carried.

On motion of Dr. A. W. Hume, Owosso, the amendment to the By-Laws offered by Dr. D. E. Robinson, Jackson, and favorably recommended by Business Committee, was taken from the table. Its adoption moved and carried.

On motion of Dr. E. L. Shurly, Detroit (duly carried) the Session of the Annual Meeting was extended to cover three (3) days.

At the request of Dr. Henry B. Baker, Lansing, the following resolution was offered:

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RESOLUTION FOR APPOINTMENT OF COMMITTEE ON  
VITAL STATISTICS.

WHEREAS, The American Medical Association at its last session passed the following resolution among others relating to vital statistics:

*Resolved*, That the American Medical Association strongly urges on the State Medical Societies that special committees be appointed to advocate and secure the passage of satisfactory registration laws in States that do not at present possess them, that County Societies support and aid in the execution of such laws as far as possible, and that physicians individually, throughout the United States, endeavor to promote the accuracy and value of the mortality statistics by giving clear and definite statements of causes of deaths on certificates of death; therefore, be it

*Resolved*, That the Michigan State Medical Society heartily welcomes the action of the American Medical Association in commanding this matter to its attention, and hereby constitutes a permanent Committee on Vital Statistics, to consist of three members appointed by the President, to carry out the above action, and more especially in regard to the passage of a satisfactory law for the registration of births in this State, the registration of deaths having already been placed upon a proper footing through laws passed at the instance of this Society;

*Resolved*, That it be made the duty of this committee to study the essential requirements of the registration of births, to interest the County Societies and secure their coöperation, to report a draft of a bill at the next annual session of this Society which, after approval, may be introduced in the Legislature of 1905 and enacted into law, and to take such other action as may promote this result.

Carried.  
Adjourned sine die.

A. P. BIDDLE, Sec'y.

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MINUTES OF THE PROCEEDINGS OF  
THE SOCIETY IN GENERAL MEETING.

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Thursday, June 11th, 10 a. m.

1. Called to order by the President, A. E. Bulson, Jackson.
2. Prayer. Rev. Edward H. Pence, Detroit.
3. Address of welcome. City Controller, F. A. Blades, Detroit.
4. Report of Committee on Arrangements. H. O. Walker, Detroit, Chairman.
5. Address of the President, A. E. Bulson, Jackson. "Reorganization of the Medical Profession of Michigan." (See Journal for July, 1903, page 260).
6. Oration on Surgery. F. W. Robbins, Detroit. "The Surgeon: His Opportunities and Responsibilities." (To be published in the Journal).

7. Miscellaneous Business:

- (a) Nominations for President.

On motion of Dr. Flemming Carrow, Ann Arbor, seconded by Dr. Donald Maclean, Detroit, Dr. William F. Breakey, Ann Arbor, was nominated for the office of President.

On motion of Dr. H. A. Wright, Detroit, duly seconded, the nominations for the office of President were closed. Carried.

Adjourned to Friday, June 12th, 11 a. m.

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Friday, June 12th, 11 a. m.

I. Unfinished Business:

Resolution offered by Dr. Donald Maclean, Detroit:

*Resolved*, "That the Michigan State Medical Society hereby express its enthusiastic admiration and sincere thanks for the able, loyal and important services rendered in the late Legislature in the matter of medical legislation by Dr. B. D. Harison, of Sault Ste. Marie."

Seconded. Carried.

On motion of Dr. Donald Maclean, Detroit, (duly carried) the Secretary was instructed to send a message of sympathy to Dr. P. D. Patterson, ex-President of the Society, who is dying from an incurable affection of the throat; also a message of sympathy to Dr. L. G. North, of Tecumseh, on account of the recent death of his eldest son.

On motion of Dr. A. E. Carrier, Detroit, (duly carried) the President appointed a committee, consisting of A. E. Carrier, Detroit; Ralph H. Spencer, Grand Rapids; and Jas. F. Breakey, Ann Arbor; which shall gather for the State Society reports as to the prevalence of Venereal Diseases in the State of Michigan.

On motion of Dr. V. C. Vaughan, Ann Arbor, (duly carried) a vote of thanks was extended to the members of the Wayne County Medical Society for their hospitable entertainment of the Society.

2. Report from the House of Delegates. A. P. Biddle, Detroit, Secretary. (See minutes of Proceedings of the House of Delegates in this issue of the Journal, page 312)

3. Oration on General Medicine. I. H. Neff, Pontiac. "The Role of Suggestions in Therapeutics." (See Journal for July, 1903, page 274).

4. Oration on Obstetrics and Gynecology. F. A. Grawn, Munising. "Obstetrics in General Practice." (To be published in the Journal).

#### Miscellaneous Business:

(a) The report of the Nominating Committee, through Dr. A. W. Alvord, Battle Creek, Chairman, showed that Dr. William F. Breakey was duly elected President of the Michigan State Medical Society.

Adjourned sine die.

A. P. BIDDLE, Sec'y.

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#### EXTRACT FROM OFFICIAL MINUTES OF THE SESSIONS OF THE COUNCIL, HELD DURING THE ANNUAL MEETING OF THE STATE SOCIETY.

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Treasurer reported cash on hand, \$1,065.62.

Chairman of Committee on County Societies reported 58 societies organized, embracing in all 78 counties, and recommended that a uniform method be established of transacting business between the parent society and its branches; namely, uniform receipts, uniform order books, uniform reports, transfer cards, etc. Carried.

The Editor of the Journal reported the subscription list of the State Society as 1,712, and recommended that all articles for publication be submitted to the Publication Committee for approval before being published. Carried.

The Chairman, Dr. Leartus Connor, submitted his report to the House of Delegates, which was accepted and adopted as the report of the Council.

Three cases of grievances were filed with the Council, which received careful attention at the

hands of the Judicial Committee and were referred back to the counties in which they arose, with recommendations.

Moved that no name other than the Editor's appear on the Journal as connected with the publication thereof. Supported and carried.

Moved that the expenses in postage, stationery, express and other necessary expenses of the Secretary of the Council be presented as a bill to the Society. Carried.

The House of Delegates elected the Council, as follows:

For 6 years—Leartus Connor, W. H. Haughey, C. B. Burr, W. T. Dodge.

For 4 years—A. E. Bulson, S. I. Small, B. H. McMullen, T. A. Felch.

For 2 years—Geo. D. Carnes, D. Emmett Welsh, Mortimer Willson, H. B. Landon.

The Council then organized with Dr. Leartus Connor as Chairman and Dr. W. H. Haughey as Secretary.

The Chairman appointed committees for the year as follows:

County Societies and Judicial Matters—W. H. Haughey, T. A. Felch, Geo. D. Carnes, A. E. Bulson.

Publication and Supervision of Articles—C. B. Burr, H. B. Landon, D. Emmett Welsh, Mortimer Willson.

Finance—W. T. Dodge, B. H. McMullen, S. I. Small, Leartus Connor. W. H. HAUGHEY,  
Secretary of Council.

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#### COUNCIL OF MICHIGAN STATE MEDICAL SOCIETY, ITS OPERATIONS FOR 1902-03.\*

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LEARTUS CONNOR, Chairman.

This first Council of the Michigan State Medical Society was elected for one year, leaving to you the responsibility of electing its successor for six years. Its duties are numerous, varied and continuous, and upon their faithful performance rests the success or failure of this organization. Formerly officers could be elected, who straightway forgot their appointment till near the annual meeting, and yet the latter suffered little loss; now each day's work must be done and intelligent consideration given important questions or disaster is inevitable.

Our organic law lays upon the Council the following specific duties:

First—The organization of branches of the State Society in every county.

Second—The constant promotion of the growth of such branches.

Third—The management of the Society's publications and selecting a Secretary-Editor.

Fourth—The care of the Society's finances—and choosing a Treasurer.

Fifth—The adjustment of differences between individuals, or branches, or both.

The Council is composed of twelve members representing the twelve congressional districts. As each district approximately represents two hundred thousand population, the number of counties in each varies with the density of population from one to sixteen.

Thus the First has but one county, Wayne—Councilor, Leartus Connor, Detroit.

The Second has Jackson, Lenawee, Monroe and Washtenaw—Councilor, N. H. Williams.

The Third has Branch, Calhoun, Eaton, Hillsdale, Kalamazoo—Councilor, Wm. H. Haughey, Battle Creek.

The Fourth has St. Joseph, Allegan, Barry, Berrien, Cass, Van Buren—Councilor, G. W. Lowry, Hastings.

The Fifth has Ionia, Grand Rapids and Ottawa—Councilor, J. B. Winery, Grand Rapids.

The Sixth has Genesee, Ingham, Livingston, Oakland—Councilor, C. B. Burr, Flint.

The Seventh has Huron, Lapeer, Macomb Sanilac and St. Clair—Councilor, O. Stewart, Port Huron.

The Eighth has Clinton, Saginaw, Tuscola and Shiawassee—Councilor, S. I. Small, Saginaw.

The Ninth has Benzie, Lake, Leelanaw, Manistee, Mason, Muskegon, Newaygo, Oceana and Wexford—Councilor, B. H. McMullen, Cadillac.

The Tenth has Alcona, Alpena, Aranac, Bay, Cheboygan, Crawford, Emmett, Gladwin, Iosco, Midland, Montmorency, Ogemaw, Oscoda, Otsego and Presque Isle—Councilor, H. B. Landen, Bay City.

The Eleventh has Antrim, Charlevoix, Grand Traverse, Gratiot, Isabella, Kalkaska, Mecosta, Messaukee, Montcalm, Oscoda and Roscommon—Councilor, W. T. Dodge, Big Rapids.

Twelfth has Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Isle Royale, Keewenaw, Luce, Mackinaw, Marquette, Menominee, Ontonagon and Schoolcraft—Councilor, Theo. A. Felch, Ishpeming.

These districts were divided into groups of three and a Vice-President elected from each, in

order that he might aid the Councilors in organizing and developing the branches. Thus, First Vice-President J. C. Willson, of Flint, has charge of the first, sixth and seventh districts (those nearest his residence.) Second Vice-President A. W. Crane, of Kalamazoo, has charge of the second, third and fourth districts (nearest his home.) Third Vice-President W. K. West, of Calumet, has charge of the eighth, tenth and twelfth districts. He organized Houghton county which has forty-five paid up members and has served as its Secretary. Houghton was the fourth county to secure a charter from the State Society. Since the entire Upper Peninsula is completely organized, long since, it is evident that the profession of that region know of good things other than copper or iron mines. Fourth Vice-President H. B. Garner, of Traverse City, has charge of the fifth, ninth and eleventh districts.

At the head of the organizing corps is President A. E. Bulson. Simple justice says that he was prodigal of his time, physical and mental equipment, and of his money, in responding to calls for help from any portion of the field. Besides he was constantly seeking opportunities to advance the interests at stake. His genial address, horse sense, tact and persistence contributed greatly to our success.

Lastly, as the assistant of all is the accomplished, "old reliable" Secretary-Editor, A. P. Biddle. He kept his eyes on every move in the organizing process, his ear open to every cry of doubt or perplexity; his hand stretched out to help; his head to council; his voice to encourage. To plant an organization upon a foundation as solid as the Laurentian Hills of the Upper Peninsula, he has toiled and planned for nearly two years. Not least of his native gifts is his ability to select the best leaders and teachers for the work.

#### ORGANIZATION OF BRANCHES.

The problems of organization given the Council for solution were novel, because no similar body of men ever had such powers and such obligations.

First—Every doctor of proper education, in good repute with his fellows, must be brought into the organization. If well behaved, he was taken in directly; if ill-mannered he must be converted and then organized. The opposition to this simple proposition was astounding; first on the part of those who regarded themselves at the top, and second from those who knew they

\*Report to House of Delegates, June 10, 1903.

were at the bottom. But a fair statement of the aims, spirit and methods of the organization always prevailed when a real hearing could be had.

Second—Every doctor must have the same rights, responsibilities and obligations as every other. This was so good a proposition that belief therein was difficult, but an honest hearing resulted in the conviction that only thus could all doctors be made factors in a single organization.

Third—Prejudice, Suspicion, Cliqueism, Indolence, "a holier than thou feeling," each was a lion in the way. Again a frank presentation cleared the atmosphere and brought friends to the movement, and each realized that the largest personal reward would be his if he joined forces with all his fellows.

Fourth—The problems of one county were different from those of another, each had to be studied *de novo* and solved by a method peculiarly its own.

Fifth—There was skepticism as to the possibility of forming any real organization of the entire profession. Many of our best friends looked upon the attempt as a fanatic's dream. But here again a hearing under favorable conditions made new friends.

Sixth—Strange to say not a few physicians avowedly say that they do not desire an organization of the entire profession. They desire membership only in what they term the "cream" of the profession; what becomes of the rest is a matter of indifference to them. The correctness of our proposition showed itself when it was able to convert even such as these. \*

Seventh—Our method called for organization by personal effort. From him who understood and believed, the good news must be carried to him who did not understand and disbelieved. How thus shall be compassed the great State of Michigan?

The results of eleven months' work are before you; showing the success we have had in solving these and allied problems. It will be recalled that adjournment at Port Huron left the Society without any legislative body. This body must be composed of delegates from branches of the State Society and not one existed. To-day we have fifty-eight branches, including seventy-eight counties. This House of Delegates represents the State of Michigan as no body of doctors ever represented any state before. The five counties still without require additional time and kindly persuasion to join our ranks.

However, we shall not rest till every foot of Michigan and every doctor is organized—it can be done and it will.

The representatives of seventy-eight counties here meet to consider common interests, under conditions favorable to full deliberation and wise action. The eyes of forty-five hundred doctors and three millions of people are fixed upon you, and the friends of medical organization eagerly await the outcome.

Your work will best stand the test of experience, if taken in harmony with the following principles:

First—A voluntary organization can only be effected and maintained by affording its members more profit and pleasure within than without.

Second—The greater the profit and pleasure to each member the stronger the organization.

Third—A method must be provided for carrying a living knowledge of such an organization to each whom it is desired to enroll.

Our Constitution and By-Laws were founded upon these principles. If they fail of exhausting the possibilities under existing conditions, it is for you to supply the oversight. It will be observed that profit and pleasure is made to depend upon the wholesome activity of every officer and every member of the organization. The organization like that of a healthy body is alive all the time. It must be fed, exercised, have work and play, and every cell harmonize with every other cell.

This meeting will fail of its best result unless to every member present come the largest opportunity to increase his knowledge of the facts and principles of medicine, to stimulate his ambition for better results from his work; to inculcate kindly feeling for his fellow workers; to augment his professional equipment in all directions. The same may be said of every meeting of every branch. Hence a fearful responsibility rests upon the officers who arrange for these meetings and in general are entrusted with the promotion of organized activity. Experience has shown that those scheming for official positions sometimes fail to show evidence in their administrations of being over weighted with such a sense of responsibility.

You will note that the Council is especially commissioned (1) to carry to the individual doctor a knowledge of the fact that a real gold mine awaits him in the securing of a life membership in the State Society, (2) to encourage each to do his own work better each day, (3) to promote

better work among his fellows, and (4) to make for peace.

The Council's first meeting was held at the Russell House in Detroit, July 9th, 1902. Nearly all the members were present, and with them met President Bulson, Vice-Presidents Willson and West, the Secretary, A. P. Biddle, and the Committee on Organization. The latter finally completed their work and turned it over to the officers as a guide in performing their duties. Leartus Connor was chosen Chairman of the Council and Wm. H. Haughey, Secretary. Together, the entire field was studied, and such methods of procedure as seemed wise adopted.

In general each Councilor was directed to familiarize himself with all doctors in his district. From these he was to select the leaders and arrange for a meeting at such time and place as they deemed wise for the purpose of organization. At this meeting he was present, to verbally explain the conditions needful to form a branch of the State Society, to smooth asperities, if such existed, remove misunderstandings, and above all infect the assembled physicians with his own unselfish spirit and enthusiasm for an organization which should live in every doctor in the state, and pulsate with similar life in every other of the United States. An organization being effected, application was made for a charter as a branch of the State Society. This application, being approved by the Councilor, was sent to the Secretary with the dues of the members and their names. In return a charter was mailed the local Society.

If desired, one or more Councilors, the President or Secretary, or all were invited to aid a Councilor in organizing a special county. These helpful visits were numerous, though they were made at the sacrifice of the railway expenses, hotel bills, loss of home business, to an extent that would surprise those unfamiliar with the facts. It is not an exaggeration to say that they amounted to many hundreds of dollars, yes thousands. Then, as now, each knew that his only reward was the consciousness of promoting a work of incalculable value to the profession.

However, such sacrifices should not be asked longer than it may be possible for the Society to pay for the actual outlay of the Council in the performance of its duties. The twenty-five dollars now allowed will suffice for some districts, but it is far too little for others. Yet, in all, the work must be done, so that interest may be maintained in the branches and the largest number of dues flow into the State Society treasury.

These dues are the financial support of the State Society. We must keep interested the individual doctor, on the outskirts of towns, at cross roads, in little hamlets, if the Society reaches its full development.

Prosecuted along its present lines, our seventeen hundred and twelve doctors will gradually swell to twenty-five hundred, three and four thousand in the near future.

The second Council meeting was held Jan. 10th, in Detroit. Every member was present, plus the President, Secretary and Treasurer.

From actual experience the members had learned much and so were able to unite on better working plans in all directions. The vast amount of business presented was referred to three committees representing the most important functions of the Council. The conclusions of these Committees were usually adopted by the Council. The salary of the Editor-Secretary was fixed at fifty dollars per month, plus twenty per cent. on money collected from advertisement, and A. P. Biddle was elected for one year.

The salary of the Treasurer was fixed at twelve and one-half dollars per month, and Chas. E. Hooker, of Grand Rapids, elected for one year.

The thoughtful student sees an herculean task in perfecting and maintaining our organization, and regards it wise to courteously decline invitations from enthusiasts to neglect our own work and assume theirs. The duty of the hour is to attend strictly to our own business of organizing every doctor and keeping him organized, by cultivating in him a regular habit of work and play with fellow doctors in his own county.

#### PUBLICATION OF SOCIETY.

The Council was directed to establish and conduct a medical journal for the publication of the work of the annual sessions of the State Society and meetings of the several branches, and for the constant instruction and stimulation of the individual physician. As soon as possible arrangements were made for this publication, and the first number issued last September, by the Secretary-Editor, A. P. Biddle. Always modest and diffident of his powers in untried fields he undertook the task with hesitation. But all of you are witnesses to his unusual success. Lack of abundant funds has crippled his work, but enough is in evidence throughout the ten numbers issued, to indicate the right man in the right place. Upon him personally the Council placed both the editorial and business management, believing that he could deal better with those whose

help he might desire from the standpoint of authority, and the Council would have less difficulty in finding the source of any especial objectionable action.

Neither Dr. Biddle nor the Council claim perfection for the Michigan State Medical Journal, but hope it bears evidence of such knowledge, industry and skill, as might be expected from those to whose care it was committed. With larger income, a better journal can be had, and a larger income awaits the development of the organization.

Especially does increase of circulation enhance the value of advertising, and so the growth of each branch makes possible a better journal, first by the money each member pays the State Society, and second by the added value to the advertising pages of an increased circulation.

It is desirable that each branch should send the Journal some notice of each meeting, making it long or short, according to matters of general interest discussed or acted upon. The Council hopes that each delegate will remember this during the year and remind the officers of his Society of this portion of their duties. It will not be expected of the Journal to publish long papers from each local Society, but it can always publish brief abstracts, giving the pith of the paper, and such other papers as are of especial interest and impossible to abstract.

To a degree almost unequaled, our Journal is filled with original matter from front to back of each issue.

It is worthy of mention that the scientific reputation of the Journal can be favorably improved by such selection of chairmen of sections and such orators as will provide the latest and best obtainable material for their meetings.

The increase of suitable advertising is desirable. Each delegate and each member of the Society can aid greatly in this direction without going out of his daily rounds. Thus, when a traveling agent asks you to prescribe his firm's preparations, turn to the Journal and see if said firm advertises therein. If not, call the agent's attention to the fact that by placing an advertisement therein, his firm would reach at least two thousand doctors in Michigan monthly, and that each of these is a part owner in said Journal. Experience has shown that such a move has resulted in the firm's seeking from Dr. Biddle advertising rates in the Journal.

A committee of the Council has the matter of publication constantly in hand, studying ways and means for its improvement in all respects. Just as

another committee has the finances in charge, and another the branches.

A regular edition of the Journal has been issued somewhat in excess of the combined membership of the Society, the advertisers, and regular exchanges, in order to fill up back sets for such new members as so desired. Even with liberal provision in this way some of the earlier numbers are almost exhausted, and impossible to supply. As they mark an epoch in medical society development, every progressive physician prizes them highly.

#### FINANCE OF STATE SOCIETY.

The financial problems presented the Council were numerous and complicated.

First—The Society reduced its annual dues from three to two dollars, and ceased collecting the initiation fee of two dollars.

Second—The Society started a Journal at a cost from three thousand dollars and upwards per year.

Third—All persons having charge of either the Journal or its management were novices—compelled to learn practically a business new to them and the Society. Even the Council had to devise an alphabet by which it might make words to express ideas quite novel to it.

The success attained in the solution of these and allied problems, may be seen in the following statement.

#### Receipts—

Cash on hand at 1902 meeting .....	\$ 440 68
Collected at 1902 meeting.....	909 00
Collected from individuals, since annual meeting .....	507 00
Collected from branches, since annual meeting, 1902 .....	2,611 15
Collected from advertisements .....	1,225 61
Total receipts .....	\$5,693 44

#### Disbursements—

Journal expense .....	\$2,254 15
Secretary—honorarium for 1902 .....	300 00
Secretary—salary, 11 months to June 1st.	550 00
Treasurer—honorarium for 1902 .....	150 00
Treasurer—salary, 11 months, to June, 1903 .....	137 50
Council expense—	
G. W. Lowry—expenses as Councilor....	25 00
Expense of January Council meeting....	126 57
Programme Committee expense .....	63 73
Reporting of 1902 meeting .....	200 00
Commission on advertisements .....	234 03
Printing, binding and stationery.....	447 34

Refunding (overpayments, county societies, initiation fees) .....	124 00
Delivering bound transactions .....	9 10
Incidentals—	
Michigan Passenger Agent .....	6 00
Bank Exchange .....	1 00
Total disbursements .....	\$4,628 42

**ASSETS.**

Cash on hand June 1st .....	\$1,065 02
Advertising contracts .....	1,141 04

Blank charters, forms of application, etc.,

All bills have been met promptly, so that the credit of the Society remains A1.

During the coming seven months must be met the monthly bills for issuing of the Journal; the expenses of the present meeting, the stipend of the Councilors (unless they choose to donate it), the monthly salaries of the Secretary, Editor, and Treasurer; the bills for postage and stationery, and incidentals.

It is clear that the closest economy will be needful to promptly meet obligations. This the Council has practiced in the past, and advises the same of the Society.

To some the postage, stationery and printing bills outside the Journal may seem excessive, but when it is recalled that constitutions and by-laws, for both state and branch societies, were printed and distributed; that their preparation called for much correspondence on the part of the several architects of the same; that questions of the most varied nature were constantly arising as the effort was made to organize along the new lines and adjust them to the points of departure from the old; that others than officials were desirous of getting information on certain points, and that others, outside of Michigan, were writing in large numbers for facts and suggestions in their own work, the wonder is that the work was done for so small a sum. It must not be forgotten that the members of the Council were engaged in a nearly constant correspondence along these same lines, and using their own stationery and supplying postage, so that the cause of organizing the branches received numerous and substantial contributions to an extent that will never be known. This is the more to be regretted, as it would illustrate the devotion of those who constructed the fabric known as the Michigan State Medical Society, and show that the underlying secret of its success was this unselfish spirit. This spirit continued, backed by strenuous effort and horse sense, is requisite to complete the structure, whose foundations have been laid in those

qualities of men that make for lasting and thorough organization.

The expense of printing and distributing the volume of transactions for 1891 was \$1,015.35. The Journal expense since last meeting was \$2,254.15. The money actually collected from advertisements was \$1,225.61. If this be taken from the expense of the Journal, we find that the Journal was supplied to the society for \$1,028.54, or about the same as the cost of the volume of transactions for 1891. It is left for each to decide the advantage of the change to the Society. If the Journal is the more valuable, it still costs one dollar less to each member yearly, or for the seventeen hundred members it nets a saving of an equal number of dollars. To this must be added the saving of the two dollars initiation fee paid by new members; 1,200 members at \$2 each= \$2,400. Clearly the change has left with the profession more dollars by four thousand, to use in other directions.

**JUDICIAL ACTION.**

In most cases of professional differences a frank discussion with the interested parties has sufficed to rectify such disputes. In one instance of an old member of the State Society, who had made himself unwelcome to the great majority of the physicians of his county, it seemed necessary to investigate the reasons therefor, and ask him to present to the Council his view of the case. Meantime a branch society was organized in the county and pursue its regular way.

The genius of our organization is essentially *peace*, and in it there is absolutely nothing to quarrel about. Farther its method is for the local branch to settle all disputes if possible, only bringing the case to the District Councilor when it has exhausted its resources, and to the Council when the Councilor has tried and failed.

**MISCELLANEOUS.**

Our organization aims to keep with it till death all who become members. In accord with this it has provided for a roll of honor, to include such who have won distinction by faithful professional work, and are prevented from active participation in society work by the disabilities of age or other infirmity. The practical application of this idea is stated in the Constitution—Art. IV, Sec. 5. In accordance therewith the Council nominates for election by you the following Nestors in the profession, who in the past did so much to promote its development. Time forbids even a brief statement of the rea-

sons for placing them at the head of the list of our honorary resident members. Some of you know all of them, all of you know some of them, so that you can act intelligently, and feel that in their election you are conserving the vigor of the Society, and express the fact that to us "the hoary head is a crown of glory" when it marks a life of manly honor and professional attainment. The names are:

S. S. French, Battle Creek.  
John S. Caulkins, Thornville.  
John R. Bailey, Mackinac.  
Jabez Perkins, Owosso.  
Morse Stewart, Detroit.

Under authority of the same article of the Constitution, Sec. 6, the Council nominates for honorary membership:

Henry M. Hurd, Baltimore, Md., known everywhere for his superb work in connection with the Pontiac Insane Asylum, and the management of Johns Hopkins Hospital, and superior attainments in all that pertains to mental diseases.

Frank Billings, of Chicago, late president of the American Medical Association, indefatigable worker in the organization of the profession of the United States, a forceful teacher and writer.

#### LECTURERS TO THE BRANCHES.

To assist the development of the branches, the Council directed the President to appoint a lecturer for each congressional district—the best man who would agree to respond to a request from any branch within his district for a lecture; to hold a clinic or read a paper at a time and place agreed upon. As announced on page 241 of the Journal, seven such appointments have been made. Already some of the branches have availed themselves of this assistance, supplied them without cost. Besides increasing the interest in meetings of the branches, this provision absorbs some of the surplus activity existing in the several districts, as it is stipulated that teachers in medical colleges are debarred from such appointment. These are already advertised and can be invited as any branch may desire. The value of outside help from persons having especial experience along certain lines, the value of a new face, a different voice, a fresh method of teaching, is well known and extensively utilized by the more progressive societies. All may not be able to visit a celebrated teacher, but all can get the benefit of such visit if he speak before their County Society. Wayne county has had visits from five men, experts along certain lines, during the past

season, to the profit of all who heard their statements and saw their exhibits. They formed a post-graduate corps. Every branch may not do as much in the line of post-graduate instruction, but it can do something, and it is the business of the Council to aid in making this little as large as possible. Our government does not provide, as does the German, a post-graduate school of experts to travel from place to place, instructing the physicians in the latest additions to medical art, but the Michigan State Medical Society can increase its provision along the same lines till it gives every doctor in Michigan some instruction in the more difficult parts of medical progress.

This makes the branches, and so the State Society, of greater interest and value to every member.

From actual experience, the Council believes that when fully understood, every physician will promptly accept the invitation to join the Michigan State Medical Society and heartily engage in its activities.

Granting this, the problem presents, "How can they be made to understand the proposition?"

In seeking a solution it must be remembered that the organization, maintenance and growth of the branches result from a proper education of the individual doctor. Who are the teachers? Clearly (1) the President; (2) the four Vice-Presidents; (3) the twelve Councilors; (4) the Editor-Secretary; (5) the Treasurer; (6) the fifty-eight Presidents of branches, the fifty-eight Secretary-Treasurers of branches; the fifty-eight Vice-Presidents of branches; (7) lastly and most important, the seventeen hundred and twelve paid-up members. If, during the coming year, each of these physicians persuades another doctor to join the State Society, the work will be complete. Then permanence is assured by each continuing similar activity during each passing year.

The Council desires to call attention to another fact, viz.: that many doctors, weak perhaps rather than wicked, but at any rate disreputable, under the personal teaching of members of the branches, have abandoned past ways, conformed to those of the State Society, been accepted by their branch as members, and since led lives creditable to both themselves and the profession.

Lastly the Council desires to emphasize the fact that such results as it reports, and others which it hopes for, are attained only by a spirit of self-sacrifice, a desire to help every fellow-doctor to help himself, for the sake of himself, for the profession and humanity.

**SUMMARY.**

The Council of the Michigan State Medical Society has held two meetings previous to this during the eleven months of its service.

Second—The problems to be solved were novel and intricate, calling for closest study and exercise of good sense. They varied in different counties, with different old medical societies, and medical institutions. Successful solutions attended a frank presentation of the principles of organization.

Third—Seventy-eight counties have been organized into fifty-eight branches, numbering seventeen hundred and twelve members, all paid up—a net gain during the year of twelve hundred members.

Fourth—There has been a large increase of professional activity and harmonious co-operation of individual members and diverse interests, and a *decrease of disintegrating forces*.

Fifth—On September, 1902, the Council started a Journal under the management of Editor-Secretary A. P. Biddle. Ten numbers have been published, and speak for themselves. Its *net* cost has about equaled that of the published transactions for the previous year. It has published the work of the last annual meeting, many papers and discussions from the branches, all news items it could secure from members, the Constitution and by-laws of both State and branch societies, and served as a friendly messenger, making monthly trips between members and branches, bearing professional aid and kindly good cheer.

Sixth—Starting with a cash balance of \$440.63, it ends with a cash balance of \$1,065.02, and all bills paid. This includes the extra expense of organization, with large bills for printing and distributing copies of Constitution and By-Laws, both of the State Society and its branches, in form separate from the Journal; for postage and stationery, and many other things inseparable from the development of so large an enterprise. As the rest of the year brings large expenses and small receipts, rigid economy is necessary at this meeting.

Seventh—in its judicial capacity it has little to report. Fuller understanding between disputants has generally resulted in healing breaches of good manners. Its efforts to promote peace have been uniformly successful.

Eighth—It has given Michigan a genuine leadership in the organization of the profession of the United States. Its spirit and methods have been eagerly sought after and largely taken as a guide by organizers in other states.

Lastly—The Michigan State Medical Society is now a living being demanding for its growth and development regular feeding, exercise and raiment; its officers are chosen because able and willing to supply the wants of the Society; its members must respond to calls upon them to give out as well as take in; all must be alert as are the cells of the human body, that growth and nutrition may be so vigorous as to make the Society immune to the hordes of parasites that seek its life blood, or the malignant, infectious microbes that beset it on every side.

**REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY.**

The proposed amendments to the present medical act, outlined in the committee's report presented to the Society last year at its Port Huron meeting, and adopted by the Society, were formally incorporated in a bill by the Legislative Committee of the State Board of Registration in Medicine, of which your chairman is a member, and this bill was introduced in the House of Representatives January 30th last, by Dr. D. M. Nottingham, of Lansing, member for the Ingham district, and referred to the Health Committee, of which he was chairman. Previous to its introduction by Dr. Nottingham, a draft of the bill had been submitted to the deans and secretaries of the several medical schools in the state, and other prominent members of the profession interested in medical legislation, and had received an almost unanimous indorsement. This bill has been passed practically unchanged by the legislature and received the signature of the Governor on the 4th inst. The leading feature of the amended bill, which will become law ninety days from the adjournment of the legislature, relates to the raising of the standard of preliminary and medical education, and its control absolutely by the State Board of Registration in Medicine, and the adoption therewith of the state examination test as a sole qualification for obtaining a certificate of registration or license in the future in this state. Under the medical act of 1899 a candidate for a state license was obliged to qualify for same either through the possession of a diploma from a recognized and approved college, or by taking the board's semi-annual examination and obtaining 75 per cent. upon specified subjects. Absolutely no qualification of preliminary or medical education was necessary to qualify for admission to this examination. Under the present amendments no one can take the board's examination, the sole

qualification for license, unless qualified through an approved and standard diploma from a listed school, academy, college or university, and a medical diploma from an institution having at least a four years' course of not less than seven months in each calendar year, also approved and listed by the board. Under the amendments power is given the board to raise from time to time both the standard of preliminary and medical education, but it cannot accept a lower standard than that just noted. In the future every student entering a medical college, not only in this state, but throughout the United States, in order to qualify for the state examination and license in Michigan, must have a certificate of matriculation of a standard recognized by the board, and which, in passing, may be stated will not be of a lower grade than that demanded by the University of Michigan, and which must be submitted to the board at the time of application for examination; consequently in the future no possible charge can be made by a college, which unfortunately has been very frequent in the past, that it had rejected a student from want of proper preliminary qualifications, and that this student had promptly been accepted by a rival school. In the amendments the board has power to investigate the standard and reputability of the course of a college not only in Michigan, but in the United States, and to refuse to recognize it, or if recognized, to unlist it if thought proper; also under the amendments the board has power to divide the examinations into primary and final, if thought proper, or to establish regulations in regard to the conduct of such examinations as thought proper.

The only other important changes or additions to the present medical act are of a disciplinarian nature and give the board power to revoke certificates obtained by fraud or perjury, and for the punishment of offenders for such causes, to revoke certificates for unprofessional and dishonest conduct, or for offenses involving moral turpitude, habitual intemperance, the drug habit, inserting obscene advertisements, and for certificates obtained or issued through error. As is absolutely necessary in clauses relating to discipline, the board is given exceptional powers, and if the case is properly and fairly conducted there is no appeal from its decision. This, however, has been emphasized very recently in the United States Supreme Court in the case of Reitz vs. State Board of Registration in Medicine. It will, therefore, be seen that the board should be able to effectively deal with cases heretofore unreachable, and the fact that it has this power will act

as a preventive to a very large extent in the future.

Experience in the last thirty years in Michigan demonstrates the fact beyond question that it is not an easy matter passing a medical bill through the Legislature. It was only by a great deal of labor, perseverance, intelligence and good generalship that the Nottingham bill has become law. In the House it was necessary to table the bill the first day of its consideration in the committee of the whole, in order to prevent all after the enacting clause from being stricken out. The principal opposition to the bill came from the osteopaths, who demanded at first to be represented on the board, and the Health Committee of the House had at one time decided to report out the bill with an osteopathic member added to the present school membership. Even so very conservative and intelligent a member as Speaker Carton, a lawyer, supported this proposition, although in favor of medical legislation. The members of the House obtained the impression that it was the intention of the amendments to drive the osteopaths from the state, from the fact that Section 8 of the bill did not exempt them from its provisions, as in the Chandler act. This, of course, gave them the status of the "under dog," and gained for them a great deal of sympathy. In addition they were well organized, with a paid lobbyist and funds without limit. A campaign of education in both houses had then to be undertaken, and the fact that osteopathy was not in any sense a system of medicine, but rather a specialized treatment, made plain. The osteopaths had noticed in the Senate a bill creating an osteopathic board modeled on similar lines to the medical bill, and creating a board of osteopathic examiners. Their 1897 act, which their present act repeals, was modeled after the 1883 Howell Medical act, and under it it is claimed all sorts and conditions of fake graduates of diploma-selling osteopathic institutions have registered in Michigan, and this new registration act lately passed by the Legislature and signed by the Governor, it is claimed will cut off some five hundred disreputable osteopaths practicing in Michigan, and will register only some one hundred and twenty-five legally so-called reputable osteopathic practitioners. As osteopaths were already legally recognized in Michigan under Act. 78, of the Public Acts of 1897, therefore as there was no principle involved in consenting that they be allowed to regulate themselves in a proper manner, the promoters of the Nottingham bill agreed to allow their bill, subject to review in the Senate Com-

mittee by your committee, passage through the House and Senate without opposition, provided they made it plain to the members of the Legislature that osteopaths were in no sense physicians and surgeons, and that in consequence they did not desire or deserve representation on the medical board. The committee had the pleasure of reviewing and correcting the osteopathic bill in the Senate Committee on State Affairs, and the alterations and modifications suggested were, through the influence of Senators Bangham and Sovereign, agreed to and adopted by the committee, and the bill, so altered and modified, was reported out and passed by the Senate and House, and has received the Governor's signature. In reviewing this bill the theory that an osteopath is not a *physician*, but a *masseur*, was strictly adhered to. The words, "osteopathic physician" were changed in every case to "osteopathic practitioner," and the lines as follows in the original, namely:

"the certificate provided in Sec. 2 of this act shall entitle the holder thereof to practice osteopathy in the State of Michigan, but it shall not authorize him to administer drugs or to perform major surgery,"

were altered to.

"the certificate provided for in Sec. 2 of this act shall entitle the holder thereof to practice osteopathy in the State of Michigan, but shall not authorize him to practice medicine and surgery within the meaning of Act. No. 237 of the Public Acts of 1899, or acts amendatory thereto."

An amendment to masseurs or nurses practicing massage or manual Swedish movement was also added to the bill. As courts have always held that osteopathy is massage and osteopaths masseurs, and that massage comes within the provisions of a medical act, and as osteopaths are prohibited from practicing medicine and surgery under their own act and exempt masseurs from its provisions, and as osteopaths are not exempted under the present medical act, and as the present medical act revokes anything in the osteopathic act in conflict with it, it seems a certainty that in order to practice under the provisions of his act it would be necessary for an osteopath to prove to the courts that the thing they designate osteopathy is really and in fact what they claim it is. For years in every state attempts have been made to get them in this position wherein they would be obliged to "fish or cut bait," but without success. It will be interesting to follow the result

now that this attempt has been successful in Michigan.

Osteopaths under their act of '97, just repealed, and through the exemption to them in this act, by the Chandler Medical Act, had a certain semi-legal status as physicians which allowed them to use the title of "Dr." and "physician" and to practice all forms of medical treatment, exclusive of the use of drugs, but under their new or present act they have absolutely no status as physicians and are specifically enjoined from practicing medicine or surgery within the meaning of the medical act. Why they accepted this present act with its iron-clad medical restrictions in exchange for an act which gave them liberties and a status not contemplated by the Legislature is a problem which your committee will not attempt to solve at the present time. However, this arrangement with the osteopaths and their friends, as noted above, made possible the passage of the Nottingham bill, and in its passage through the House the medical bill was given generous and honest support by the representative osteopaths who, to their credit, kept their agreement to the letter. It may be added in passing also that the active supporters of the medical bill kept their agreement, namely, that the osteopathic bill should go through the Senate and House unchanged as reported out by the Senate Committee on State Affairs.

Organized opposition to the preliminary educational clause of the bill was met with in its passage through the House. This opposition was fathered by the Homeopathic Practitioners' Society of Detroit, who represented some five per cent. of the homeopaths in this state, and who endeavored to have the approval by the board of diplomas from a high school, academy, college or university amended so that a medical college could accept as a matriculant the holder of any high school, academy or college diploma of the United States. This change if made would have taken away from the board control of the standard of preliminary education and would have resulted in a low standard for the present and also would have prevented any increased standard in the future, and therefore would have completely destroyed the very intent of the act—control of the standard of preliminary and medical education by the state. This opposition was defeated in its purpose simply through the want of preliminary education possessed by those who represented the opposition. By consent the following lines, namely:

"That such applicant shall have, previous to the beginning of his course in medicine, a diploma from a high school, academy, college or university *approved by this board.*"

were changed to its present reading:

"That such applicant shall have previous to the beginning of his course in medicine a diploma from a *recognized and reputable* high school, academy, college or university having a classical course."

In law a recognized and reputable institution becomes so recognized and reputable through and only by "approval by the board." The great majority of homeopaths in the state, however, represented by such men as D. M. Nottingham, M. D., Lansing, O. R. Long, M. D., Ionia, M. C. Sinclair, M. D., Grand Rapids, Joseph H. Cowell, M. D., Saginaw, Albert Lodge, M. D., and Oscar Le-Seure, M. D., of Detroit, stood for the bill in its entirety and opposed the demands of the Detroit Homeopathic Practitioners' Society. The bill had also the undivided support of the State Eclectic and Physico-Medical Societies.

Michigan has now one of the best, if not the most efficient medical act in the United States. Under it an ever-increasing medical standard is assured. This act also will promote medical reciprocity. Already Michigan has justly earned the name of "mother of practical medical reciprocity;" as she is the originator of the federation of state boards under which a practical basis of medical reciprocity has been established, and the several state boards of such confederation are now daily registering practitioners upon the qualification of reciprocity certificates.

In closing this report, which is necessarily somewhat long, your committee would commend, among others, for services in connection with the passage of the bill Senators Arthur D. Bangham, M. D., and Fred F. Sovereign, M. D., of the Senate, and Representatives D. M. Nottingham, M. D., S. J. Colby, Wayne, Theodosius Wade, Allegan, and L. T. Hemans, Ingham, of the House, to all of whose efforts in its behalf the Chandler-Nottingham Medical Act in large part owes its existence. The active members of the Legislative Committee of the State Medical Board who are responsible for the amended act, and who had the bill in charge continuously during its passage are: William Bell, M. D., Chairman, W. H. Sawyer, M. D., Joseph H. Cowell, M. D., J. B. Griswold, M. D., and B. D. Harison, M. D., Secretary

Your committee would also commend the very effective and willing work done in the interests of the medical act by the fifty-eight County Medical Societies throughout the state in affiliation with the State Society. These societies passed resolutions advising their respective Senators and Representatives to support the proposed act, and individual members of each Society used their personal influence with legislators in favor of the bill. We believe that this united action on the part of the Societies resulted in much good."

B. D. HARISON, Chairman.

GEORGE E. RANNEY,

BION WHELAN,

Committee on Legislation  
and Public Policy.

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REPORT OF AUXILIARY COMMITTEE TO  
THE COMMITTEE ON NATIONAL LEG-  
ISLATION OF THE AMERICAN  
MEDICAL ASSOCIATION.

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EMIL AMBERG,

Detroit.

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In view of the fact that in 1902 the conference of the committees on National Legislation of the American Medical Association was very much interested in the reciprocity movement I should like to report the progress of the work. As you are aware the efforts of those who have been working for reciprocity resulted, among other things, in the formation of the American Confederation of Reciprocating Medical Examining Boards. Although the same idea has been taken up by others this Confederation especially was formed mainly upon suggestions of your delegate. The profession, as a whole, is under obligation to those men who have established the various unions of medical examining boards, of which the latest is the one in which the Secretary of our State Medical Board is very much interested.

The hard and conscientious work done by the Secretary of our State Medical Board, Dr. B. D. Harison, of Sault Ste. Marie, who at the same time fills the position of Secretary of the American Confederation of Reciprocating Medical Examining Boards, cannot be commended too highly.

A great deal of misconception concerning reciprocity is still manifest, in spite of the efforts

of those who, again and again, have pointed out and are pointing out the fact that reciprocity means, not a lowering of the standard, but always a raising of the same. The true spirit of reciprocity has been admirably aided by the recent meetings at New Orleans. So far as your delegate has learned from rather exhaustive reports in the lay press, the National Confederation of State Medical Examining and Licensing Boards has given a great deal of attention to conditions of medical colleges and advocated uniformity of medical education. This certainly is a great aid to reciprocity.

The American Medical Association has also worked towards the same end. Not only has the President of the American Medical Association, Dr. Frank Billings, expressed the opinion of the intelligent public and of the well meaning members of the profession in unmistakable terms, but the spirit of uniformity of a high character is the key-note of all transactions of those in New Orleans on whom the attention of the profession of this country was centered, about a month ago.

It may again be repeated that the very word reciprocity invites comparison. One state asking reciprocity from another state will immediately be examined as to its laws and standard of education, and if reciprocity should be refused, the citizens and physicians of the state may well ask for the reason why this is done. The State Medical Boards, and through the same the medical profession and the public, will learn that the refusal is based on the inefficiency of the medical laws and institutions, and what American citizen will allow conditions to continue which make the community appear to be of a lower intellectual and moral standard in professional matters than a neighboring community? The very nature of our country does not allow any rapid changes to take place; the changes have to work themselves out, and reciprocity is admirably fitted to let this grinding process go on gradually. This evolutionary development will not cease until the license to practice medicine in any state of our country means that the holder of this license is a physician in any state, territory or province.

The perhaps possible, although not yet probable, establishment of a voluntary National Examining Board works toward the same end, and is practically nothing else but reciprocity, because it means the acceptance of a license by a state, even if this state did not examine the graduate. It means a concession on a high basis, just like true reciprocity. It is voluntary on the part of the state to accept the licensiate. It appears that

the work done at present by the various state boards in the American Confederation of Reciprocating State Boards may lead towards the same end, as the reciprocating state boards can easily appoint a central examining committee among their members, if they should choose to do so.

In whatever form the final result presents itself is immaterial. Whatever may be accomplished, so much is certain, that like under other circumstances, only hard and conscientious work will be accompanied and followed by success and any efforts on the part of those who try to replace unhealthy conditions by sound conditions should be aided by every member of the profession. I call attention to the Constitution of the American Confederation of Reciprocating, Examining and Licensing Medical Boards of the United States of America, which is attached to this report.

I cannot refrain here from again giving credit to the Wayne County Medical Society, of Detroit, which appointed, in the year 1899, a committee in order to further uniform medical legislation. Little did some members of the Society think at that time of how far reaching importance their efforts would be. From the Atlantic to the Pacific, and from the Gulf to the Lakes the question has been taken up, and even if nothing practical would have been achieved, much has been accomplished by the mere fact that professional sentiment towards higher education and towards removal of unwarranted and untimely barriers has plainly been brought to the surface. It cannot be denied that by the efforts of the Committee of the Wayne County Medical Society the profession all over the United States has begun to pay more attention than ever before to almost all questions involved, and whether it is to be in the end the establishment of reciprocity on the original plan, or whether it be the formation of some kind of a central examining board, those who will read the medical history of the end of the nineteenth and of the beginning of the twentieth century must trace the origin of the movement in its effective form to the Wayne County Medical Society of Michigan, and to its Committee.

The Committee proper on National Legislation of the American Medical Association, consisting of three well known members, had power to act ad interim, and their efforts in regard to the anti-vivisection bill are known.

Provided that the American Medical Association should ask for the continuance of the Auxil-

iary Committee to the Committee on National Legislation of the American Medical Association your Committee recommends to the Society that such a committee be continued.

#### THE NOTTINGHAM MEDICAL ACT.

ACT NO. 353, LAWS OF 1903.

(Amending Act 237, Laws of 1899.)

AN ACT to amend sections one, three and seven of act number two hundred and thirty-seven of the public acts of eighteen hundred and ninety-nine, entitled, "An act to provide for the examination, regulation, licensing and registration of physicians and surgeons, and for the punishment of offenders against this act, and to repeal acts and parts of acts in conflict therewith."

The People of the State of Michigan enact:

Section 1. Sections one, three and seven of act number two hundred and thirty-seven of the public acts of eighteen hundred and ninety-nine, entitled, "An act to provide for the examination, regulation, licensing and registration of physicians and surgeons, and for the punishment of offenders against this act, and to repeal acts and parts of acts in conflict therewith," are hereby amended so as to read as follows:

Section 1. The Governor shall appoint by and with the advice and consent of the Senate, ten resident electors of the State, who shall constitute a Board of Registration in Medicine. Not more than five of the persons so appointed shall be from the school of medicine known as regular; not more than two of the persons so appointed shall be from the school of medicine known as homeopathic; not more than two of the persons so appointed shall be from the school of medicine known as eclectic; and not more than one of the persons so appointed shall be from the school of medicine known as physio-medical, and the Governor may select such appointees from the latest lists filed in the office of the Secretary of State at Lansing by each of the four legally incorporated State medical societies of the schools of medicine as herein mentioned aforesaid, such lists to be certified to under oath of the president and secretary of each society respectively, and such lists to contain at least treble the number of names as each society has representatives on the board. But in the event that one or more of the societies above named, through their presidents or secretaries, shall, from any cause, neglect, omit or refuse to file as aforesaid, such list or lists, then and in that case the Governor

shall appoint or fill the vacancies in said board without reference to such list or lists which the aforesaid society or societies have for any cause neglected, omitted or refused to file with the Secretary of State, as herein mentioned aforesaid; but the number of representatives from each of the schools of medicine shall be the same as provided for in this act. All persons so appointed shall be legally registered physicians of this State, shall be graduates in good standing of reputable medical colleges, and shall have been actively engaged in the practice of medicine in this State for at least six years immediately preceding the time of such appointment. The ten persons so appointed shall be appointed in two classes, each class to consist of five persons. The first class shall consist of those physicians appointed by the Governor under act number two hundred thirty-seven, laws of eighteen hundred ninety-nine, October first, A. D. nineteen hundred one, who shall serve during the time for which they were so appointed, namely: To October first, nineteen hundred five; and the second class shall be appointed to hold office for four years beginning with the first day of October of the present year, and both classes shall hold office until their successors are appointed; and thereafter the Governor shall appoint, before the first day of October of each biennial period, five persons qualified as aforesaid, in each class, to hold office for four years from the first day of October next ensuing. No member of said board shall belong to the faculty of any medical college or university. The Governor shall also fill vacancies occasioned by death or otherwise, and may remove any member for the continued neglect of duties required by this act. Vacancies in said board shall be filled in accordance with the provisions of this act for the establishment of the original board, and a person appointed to fill a vacancy shall hold office during the unexpired term of the member whose place he fills. The business of said board shall be transacted by and receive the concurrent vote of from at least seven members.

Section 3. On and after the date of the passage of this act, all men and women who wish to begin the practice of medicine and surgery in any of its branches in this State, shall make application to the State Board of Registration in Medicine, to be registered and for a certificate of registration. This registration and certificate shall be granted to such applicants as shall give satisfactory proofs of being twenty-one years of

age and of good moral character, but only upon compliance with at least one of the following conditions contained in subdivisions one, two and three of this section:

First, The applicant shall be registered and given a certificate of registration if he shall satisfactorily pass an examination before the board upon the following subjects: Anatomy, physiology, chemistry, pathology, materia-medica and therapeutics, toxicology, histology, practice of medicine, surgery, obstetrics, gynaecology, mental and nervous diseases, diseases of the eye, ear, nose and throat, bacteriology, hygiene, public health laws of Michigan and medical jurisprudence; said examination to be conducted as follows:

(a) The applicant shall pay a fee of twenty-five dollars prior to examination: Provided, That the examination fee for graduates of any medical school in the State of Michigan, approved by said board, shall be the sum of ten dollars.

(b) The examination shall be in writing, oral or both.

(c) The questions on all subjects, except in materia-medica and therapeutics and practice of medicine, shall be such as may be answered alike by all schools of medicine.

(d) The applicant shall, if possible, be examined in materia-medica and therapeutics and practice of medicine by those members of the board, or by a qualified examiner appointed by the board, belonging to the same school as the applicant, and no applicant shall be rejected because of his adherence to any particular system of practice.

(e) An average percentage of at least seventy-five per cent. of correct answers shall be required from every candidate. No additional fee shall be charged by this board for the registration of those who successfully pass such examination: Provided, however, That such applicant for examination shall have a diploma from a legally incorporated, regularly established and reputable college of medicine within the states, territories, districts and provinces of the United States, or within any foreign nation (provided such foreign nation accord a like privilege to graduates of approved medical colleges of this State) having at least a four years' course of seven months in each calendar year, as shall be approved and designated by the Board of Registration in Medicine: Also Provided, That such applicant shall have, previous to the beginning of his course in medicine, a diploma from a recognized and reputable high school, academy, college or university,

having a classical course, or shall pass an examination equivalent at least to the minimum standard of preliminary education adopted and published by the board before examiners appointed by and in accordance with the regulations of aforesaid board, and at such time and place as the board may designate: Provided, A student entering a college in Michigan, having a preliminary examination of a standard approval by the Board of Registration in Medicine shall not be required to take this examination. Provided, That this requirement of preliminary education shall not apply to those students who, on the date of the passage of this act, were regularly registered as students of legally organized and reputable medical colleges approved of by said board: And provided, also, That the requirement of medical education shall not apply to those graduates of legally organized and reputable medical colleges approved of by said board who had graduated from such colleges, previous to the date of the passage of this act; and students complying with the other provisions of this section, who on January first of the present year were regularly registered as students of legally organized and reputable medical colleges of this State, approved of by said board, may obtain a certificate of registration as graduates of such colleges and without examination by the board upon payment of a fee of ten dollars. The Board of Registration in Medicine shall, from time to time, adopt and publish a minimum standard of medical education, and no medical college shall be approved and designated by said board under this subdivision one, of section three, unless, in the judgment of the board, it conforms with such standard;

Second, The applicant shall be registered and given a certificate of registration if he shall present a certified copy or certificate of registration or license which has been issued to said applicant in any foreign nation where the requirements of registration shall be deemed by said Board of Registration in Medicine to be equivalent to those of this act: Provided, Such country shall accord a like privilege to holders of certificates from this board. The fee for registration from applicants of this class shall be twenty-five dollars;

Third, The applicant shall be registered and given a certificate of registration if he shall present a certified copy of certificate of registration or license which has been issued to said applicant within the states, territories, districts or provinces of the United States where the requirements for registration shall be deemed by the

Board of Registration in Medicine to be equivalent to those of this act, and shall otherwise conform to the rules and regulations agreed upon between the State Board, of which he is a licensee, and said board relative to the recognition and exchange of certificates between states: Provided, Such states shall accord a like privilege to holders of certificates from this board. The fee for registration from applicants of this class shall be twenty-five dollars;

Fourth, If any person shall unlawfully obtain and procure himself to be registered under this section, either by false and untrue statements contained in his application to the Board of Registration in Medicine, or by presenting to said board a false or untrue diploma or license, or one fraudulently obtained, he shall be deemed guilty of a felony, and on conviction thereof shall be punished by a fine of not less than three hundred dollars nor more than five hundred dollars, or imprisonment at hard labor for not less than one year, nor more than three years, or both, at the discretion of the court, and shall forfeit all rights and privileges obtained or conferred upon him by virtue of such registration as a physician or surgeon;

Fifth, Any person who shall swear falsely in any affidavit or oral testimony made or given by tions of the Board of Registration in Medicine, shall be deemed guilty of perjury, and upon conviction thereof shall be subject to all the pains and penalties of perjury;

Sixth, The Board of Registration in Medicine shall refuse to issue a certificate of registration provided for in this section to any person guilty of grossly unprofessional and dishonest conduct of a character likely to deceive the public, and said board shall, after due notice and hearing, revoke a certificate issued subsequent to the date of the passage of this act, or subsequent to the date of the passage of act number two hundred thirty-seven of the public acts of eighteen hundred ninety-nine, for like cause or for offenses involving moral turpitude, habitual intemperance, the drug habit, or for fraud or perjury in connection with obtaining of a certificate of registration or for a certificate obtained or issued through error, when such offenses shall have been legally established in a court of competent jurisdiction: And, provided further, After the passage of this act, the board may at its discretion revoke the certificate of registration, after due notice and hearing, of any registered practitioner who inserts any advertisement in any newspaper, pamphlet, circular, or other written or printed paper, relative to venereal diseases or other matter of any obscene or offensive nature derogatory to good morals.

Section 7. Any person who shall practice medicine or surgery in this State without first complying with the provisions of this act, or any person who shall violate its provisions (except as heretofore provided in section three of this act), shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than one hundred dollars, or by imprisonment in the county jail for a period of not more than ninety days, or by both such fine and imprisonment, for each offense. It shall be the

duty of the prosecuting attorneys of the counties of this State to prosecute violations of the provisions of this act.

#### BUT ONE PROFESSION OF MEDICINE

The ethics of all the educated classes of people distinguish them from each other, as well as from the unlearned, and we may now find but little ground for dividing the medical profession into separate classes. Sectarianism fades before the broadening lights of a uniform course of systematic education, just as the refining process of analysis separates the pure gold from the adulterating deposits of earth in which the crude ore is found. Education just as certainly creates ethical regulations for individuals deportment as it broadens the sphere of intellectual activity. With the general recognition of these facts all opposition to ethical rules vanish.

If the medical profession is not now a confraternity it soon will be. It is certainly reduced to a common plane as to collegiate training and legal exaction, and it has so far advanced in the growth of knowledge as to be at once conspicuous in the intellectual pre-eminence of its teachers and practitioners.

To assist in this great work of advancement the profession itself must be organized. The recently adopted plan of the American Medical Association to have all the states organized with their auxiliary county and district societies, provides a broader and better field for the continuation of our further development in those channels of scientific knowledge which experimental research alone may unfold to us. Laboratories for experimental tests are every day opening to us some of the mysteries of pathology and laying the sure foundation of new therapeutic procedures. The Roentgen rays of electric light came from the experimental laboratory to aid us in the diagnosis of internal growths, the dislocation of fractured bones, the presence and location of foreign bodies hidden by the flesh of our bodies; and, later, to melt away malignant growths on the surface and within the body. Hundreds of other blessings to humanity have resulted from the community of experimental science.

We never ask what political, religious or other opinions are held by the doctors of medicine. The great question is this, has he a systematic and duly accredited medical education? Has he been lawfully admitted to the practice of his profession? Now, as physicians, we may ask, does he possess a collegiate degree from a first-class medical school, and is he disposed to observe those ethical rules our organized societies have established for the observance of the members, and will he unite with us in our attempts to uphold and maintain the honor and dignity of the profession as a body?

We are one profession in spite of any number of protesting individuals. We are one profession by virtue of our community of interest, occupation and educational training. We are one profession by virtue of our lives of devotion to a common cause.—DUDLEY S. REYNOLDS, A. M., M. D., Louisville, in *American Medical Association*. June 27, 1903.

## A RAPID AND EASY METHOD FOR THE STERILIZATION OF CATGUT LIGATION AND SUTURE MATERIAL.

Since the introduction of catgut as a ligature and suture material by Lister, efforts have been directed to perfect and simplify the method for its sterilization. The delicate structure of the material will not permit of harsh treatment, therefore sterilization must be accomplished with great care, otherwise the tensile strength will be impaired. Usually the technic leading to the desired result is complicated, costly, and time consuming.

The various methods for the sterilization may be summarized under the following heads:

*Dry Heat.*—The process consists in baking the material at a temperature of about 220° F. Properly the temperature should be raised gradually and be maintained for from one to two hours, depending upon the size of the catgut. The process should be repeated twice at least, allowing an interval for germ development from spores. Even with every care weak spots are likely to develop in the catgut prepared with this method of sterilization.

*Moist Heat.*—The sterilization in the majority of methods coming under this head depends upon the high boiling points of certain liquids in which the catgut is immersed. The liquids commonly used are mixtures of the hydrocarbons, such as cumol (cumene), B. P. 152°-153° C.; zylene (xylel), B. P. 136°-143° C.; benzin and alcohol, B. P. 50°-60° C., and about 78° C., respectively. It may be said, however, that the boiling point of the latter two is far from being high enough to kill even the less resisting spores. All of these liquids are inflammable and require, as a rule, complicated and expensive apparatus to carry out the sterilization safely.

*Chemicals.*—Those commonly used are: Carbolic acid, chromic acid, creolin, formalin, and mercuric chlorid. The latter heads the list for efficiency, and is found in the majority of formulas. It is known to kill the most resisting spore—that of anthrax—in a few minutes, using a solution 1-1000. Lately iodin has been used. The theoretic objection to the use of a chemical germicide is its supposed effect in lowering tissue resistance and thus favoring infection. Mercuric chlorid is said to increase wound secretion, thus producing a favorable culture-medium for the growth of pus-forming bacteria.

The object of this article is to give to the profession a rapid and easy method for the sterilization of catgut, which has proved its reliability in practical tests, having been used in some 3,000 operations. Wounds in which catgut so prepared has been used have healed rapidly, and suppurations following have been unusually rare and could not be traced to the material. It has also been tested bacteriologically, always with negative result.

*The Technic.*—Have ready one two-quart and one one-quart clean fruit jar for each size of the material used. It is well to have an extra one-quart jar for use in preparing a fresh batch when one on hand is nearly used. The jars must be thoroughly cleaned beforehand and sterilized by boiling or dry heat. The various sizes of catgut can be purchased from any reliable firm dealing in surgical supplies. The sizes found most convenient are 00, 0, 1, 2, and 3. The first three sizes are cut into lengths of about ten inches and used for ligatures and sutures; the last two, 20 inches—used for pedicles, etc. For convenience, a piece of wood 10" x 3" x 1/4" is obtained, and both ends cut to a point and notched at intervals of one-quarter of an inch for catching the ends of the strands. After winding lengthwise, cut the smaller sizes at both ends of the board; the larger at one end only. Three strands of a similar size of the short lengths are placed in an envelope of unglazed paper, a convenient size being 3" x 1 3/4". Two strands of a similar size of long lengths are likewise placed in envelope. Seal and mark with an indelible pencil the size number on the outside of the envelope. The number should be made large enough to be plainly seen. It does away with the necessity of putting germ-catchers on the outside of the jar. Envelope and contents of similar size are kept in a two-quart jar until wanted.

Sterilization is accomplished by placing 40 or 50 envelopes and contents in a one-quart jar and completely filling it with the following germicidal solution:

Mercuric chlorid.....	1. (15 gr.)
Tartaric acid.....	5.5 (75 gr.)
Columbian spirits	
Ether .....	of each 473. (1 pint.)

Put on the cover and screw it down tightly. Allow size 00 to remain in the solution for four hours; size 0, six hours; size 1, eight hours, size 3, twelve hours. After the material has been immersed for the desired time pour off the solution and drain, then cover envelopes and contents with columbian spirits, screw on the cover, and put away in a clean place until wanted. It is essential that columbian spirits be used. Ethyl alcohol cannot take its place, even when the absolute alcohol is used. Columbian spirits is a pure methyl (wood) alcohol practically free from water. It is inexpensive, costing less than the ordinary alcohol. It can be obtained usually at paint stores. It serves to toughen the catgut, acting much the same way as does formalin. In removing the envelopes from the jar use a pair of vulsell forceps kept expressly for this purpose. Thread the needles, then place in recently distilled water. Catgut prepared by this method possesses all the requisites of a good ligature and suture material—strength, pliability, and most important, asepsis. The technic of sterilization is easy to carry out and it is inexpensive. The very minute quantity of mercuric chlorid remaining in the material overcomes the theoretic objections to its use.

J. M. GARRATT, M. D., Buffalo, in *American Medicine* for June 27, 1903.



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